TECHNIVELDUSA

2020-2021 PRODUCT CATALOG

Revised 11-23-2020

TECHNIVELDUSA

No matter your welding needs, **Techniweld USA** is here to help. Founded in 1985, **Techniweld USA** is a comprehensive wholesaler and manufacturer of welding, safety, and industrial supplies. Through joint ventures of American engineering and specialized, yet affordable, overseas manufacturing, we're able to offer the highest quality MIG, TIG, Stick, Oxy-fuel, and safety products at a fraction of the cost of comparable brands.

Techniweld USA is fully committed to customer service. Our four distribution centers across the United States along with our multilingual international export department, allow us to conveniently serve you anywhere in the world. With the most knowledgeable sales, metallurgist, and engineering staff in the industry, **Techniweld USA** is the wholesaler of choice for troubleshooting any welding related hurdles.

Buy with confidence knowing **Techniweld USA**'s average employee has over 15 years of welding related experience. We're fully willing and able to serve your welding, safety, and industrial supply needs with the utmost professionalism, experience, and dependability.

Our Commitment

- Innovative, high quality products at competitive prices
- Ample inventory at all of our four locations
- Knowledgeable Techniweld USA support available for all products
- Full commitment to our customers



Top Vendor Lines



WWW.TECHNIWELDUSA.COM

TABLE OF CONTENTS

STARTING ON PAGE



WWW.TECHNIWELDUSA.COM

1 (800) - 445 - 2152



FOR ALL YOUR ELECTRODE/ STICK WELDING NEEDS AND ACCESSORIES

Quality Standards

Techniweld USA's, ARC Star™



- Electrode Holders 6 7
 - Ground Clamps 7 8
 - Welding Cable 8 10
 - Cable Reels 10
- Cable Connectors 10 11
 - Cable Lugs 12
- Gouging Torch & Carbons 12-13
 - Canisters 13
 - Rap-Arounds 13
 - Electrode Ovens 14-15

WWW.TECHNIWELDUSA.COM

ゴ







EHJ500



EHRAF200



EHRAF300



6

ARC Star[™] Electrode Holders

ARC Star's™ electrode holders are made from high quality materials for both high conductivity and improved cable connections. The lever is ergonomically designed for good hand clearance and better hold. The grooved jaw design and high-strength spring ensures a firm grip. We offer a wide range of styles, sizes, and capacities that are lightweight and easy-to-use.

Bernard Style Electrode Holders

Features:			
 Bernard 	Com	patibl	e

- Lightweight and easy to operate with good hand clearance and better hold

The high-temperature and high impact-resistant molded body protects against electrical shock

Item Number	Style	Amp
EHB400	BERNARD STYLE HORT-STUB ELECTRODE HOLDER	400 AMP
EHB600	BERNARD STYLE ELECTRODE HOLDER	600 AMP

Jackson Style Electrode Holders

Features: - Jackson Compatible · Fully insulated and protected springs Lightweight and easy to operate with newly designed lever
 The high-temperature and high impact-resistant molded for good hand clearance and better hold body protects against electrical shock - Grooved jaws allow electrodes to be used at different angles for greater comfort and efficiency

Item Number	Style	Amp
EHJ300	JACKSON STYLE ELECTRODE HOLDER	400 AMP
EHJ500	JACKSON STYLE ELECTRODE HOLDER	500 AMP

Lenco Style Electrode Holders

Features:

Lenco Compatible

- · Fully insulated and protected springs
- · Lightweight and easy to operate with newly designed lever for good hand clearance and better hold
- - The high-temperature and high impact-resistant molded body protects against electrical shock

Item Number	Style	Amp
EHRAF200	LENCO STYLE ELECTRODE HOLDER	200 AMP
EHRAF200B	LENCO STYLE ELECTRODE HOLDER (50/CASE)	200 AMP
EHRAF250	LENCO STYLE ELECTRODE HOLDER	250 AMP
EHRAF250B	LENCO STYLE ELECTRODE HOLDER (50/CASE)	250 AMP
EHRAF300	LENCO STYLE ELECTRODE HOLDER	300 AMP
EHRAF300B	LENCO STYLE ELECTRODE HOLDER (30/CASE)	300 AMP
EHRAF350	LENCO STYLE ELECTRODE HOLDER	350 AMP
EHRAF350B	LENCO STYLE ELECTRODE HOLDER (30/CASE)	350 AMP
EHRAF500	LENCO STYLE ELECTRODE HOLDER	500 AMP
EHRAF500B	LENCO STYLE ELECTRODE HOLDER (30/CASE)	500 AMP

(Continued on next page)

EHJ300



Tweco Style Electrode Holders

Features:

- Tweco Compatible
- Lightweight and easy to operate with newly designed lever for good hand clearance and better hold
- Fully insulated and protected springs
- The high-temperature and high impact-resistant molded body protects against electrical shock

Item Number	Style	Amp
EHT200	TWECO STYLE ELECTRODE HOLDER	200 AMP
EHT200CS	TWECO STYLE ELECTRODE HOLDER (CLAMSHELL PACK)	200 AMP
EHT200B	TWECO STYLE ELECTRODE HOLDER (50/CASE)	200 AMP
EHT250	TWECO STYLE ELECTRODE HOLDER	250 AMP
EHT250CS	TWECO STYLE ELECTRODE HOLDER (CLAMSHELL PACK)	250 AMP
EHT250B	TWECO STYLE ELECTRODE HOLDER (50/CASE)	250 AMP
EHT300	TWECO STYLE ELECTRODE HOLDER	300 AMP
EHT300CS	TWECO STYLE ELECTRODE HOLDER (CLAMSHELL PACK)	300 AMP
EHT300B	TWECO STYLE ELECTRODE HOLDER (50/CASE)	300 AMP
EHT350	TWECO STYLE ELECTRODE HOLDER	350 AMP
EHT350CS	TWECO STYLE ELECTRODE HOLDER (CLAMSHELL PACK)	350 AMP
EHT350B	TWECO STYLE ELECTRODE HOLDER (30/CASE)	350 AMP
EHT500	TWECO STYLE ELECTRODE HOLDER	500 AMP
EHT500CS	TWECO STYLE ELECTRODE HOLDER (CLAMSHELL PACK)	500 AMP
FHT500B	TWECO STVLE ELECTRODE HOLDER (30/CASE)	500 AMP



EHT200



EHT300



EHT500

ARC Star[™] Ground Clamps

ARC Star's[™] ground clamp design helps eliminate arc blow and makes it easy to change ground location for the best results. The large contact area assures positive grounding. They are manufactured from copper alloy with forged brass conductors that assure excellent current carrying ability. All steel ground clamps have a copper braided shunt. Tweco style ground clamps are made with heavy-duty springs to provide positive strength at jaws.

Features:

- Can be used in stick welding, submerged arc welding, gas metal arc welding and gas tungsten arc welding applications

Heavy duty insulated spring

Rugged and reliable copper cast design

Item Number	Style	Amp
GC80	GROUND C-CLAMP	800 AMP
GCJ300	JACKSON STYLE GROUND CLAMP	300 AMP
GCJ500	JACKSON STYLE GROUND CLAMP	500 AMP
GCL200	LENCO STYLE GROUND CLAMP	200AMP
GCL200B	LENCO STYLE GROUND CLAMP (50/CASE)	200AMP
GCL300	LENCO STYLE GROUND CLAMP	300AMP
GCL300B	LENCO STYLE GROUND CLAMP (50/CASE)	300AMP
GCL500	LENCO STYLE GROUND CLAMP	500AMP
GCT200	TWECO STYLE GROUND CLAMP	200 AMP
GCT200CS	TWECO STYLE GROUND CLAMP (CLAMSHELL PACK)	200 AMP
GCT300	TWECO STYLE GROUND CLAMP ECTWC30	300 AMP
GCT300CS	TWECO STYLE GROUND CLAMP (CLAMSHELL PACK)	300 AMP
GCT300B	TWECO STYLE GROUND CLAMP (50/CASE)	300 AMP
GCT500	TWECO STYLE GROUND CLAMP	500 AMP
GCT500CS	TWECO STYLE GROUND CLAMP (CLAMSHELL PACK)	500 AMP

(Continued on next page)







GCL200



GCT200

TECHNIWELDUSA



GCWAK500



MIG300







GCWAK200	WAK200 STEEL GROUND CLAMP	200 AMP
GCWAK200CS	WAK200 STEEL GROUND CLAMP (CLAMSHELL PACK)	200 AMP
GCWAK200B	WAK200 STEEL GROUND CLAMP (50/CASE)	200 AMP
GCWAK300	WAK300 STEEL GROUND CLAMP	300 AMP
GCWAK300CS	WAK300 STEEL GROUND CLAMP (CLAMSHELL PACK)	300 AMP
GCWAK300B	WAK300 STEEL GROUND CLAMP (50/CASE)	300 AMP
GCWAK500	WAK500 STEEL GROUND CLAMP	500 AMP
GCWAK500B	WAK500 STEEL GROUND CLAMP (50/CASE)	500 AMP
GCWAK500CS	WAK500 STEEL GROUND CLAMP (CLAMSHELL PACK)	500 AMP
MIG300	GROUND C-CLAMP MIG STYLE	300 AMP

ARC Star[™] Welding Cable

ARC Star[™] offers a variety of welding cable assemblies in sizes 4, 2, 1, 1/0, 2/0, 3/0, and 4/0. We have leads, grounds, and extensions in any length and configuration. We also offer cut cable in multiple lengths without ends. We can supply ground clamps, electrode holders, lugs, and cable connectors with our proprietary ARC Star[™] brands on the ends or OEM's such as, Tweco, for any of the assemblies you may need. If you have a bulk buy or just need one assembly we can take care of all of your needs.

Features:

- Premium American made welding cable
- Boxed cable kits optimized for shipping and display
- Available in custom cut sections fully assembled with ends
- Private labeling available with minimum order quantities
- Only the highest quality cable accessories are used in our
- custom cable kits

sed in our

Full Cable Reels

Item Number	Cable	Color	Length
PRE4B250	#4 REEL WELDING CABLE	BLACK	250 FT
PRE4	#4 REEL WELDING CABLE	BLACK	500 FT
PRE2	#2 REEL WELDING CABLE	BLACK	500 FT
PRE2B250	#2 REEL WELDING CABLE	BLACK	250 FT
PRE1	#1 REEL WELDING CABLE	BLACK	500 FT
PRE1B250	#1 REEL WELDING CABLE	BLACK	250 FT
PRE10B250	#1/0 REEL WELDING CABLE	BLACK	250 FT
PRE10	#1/0 REEL WELDING CABLE	BLACK	500 FT
PRE10BLUE*	#1/0 ON WELDING CABLE	BLUE	500 FT
PRE10B1000	#1/0 REEL WELDING CABLE	BLACK	1000 FT
PRE20B250	#2/0 REEL WELDING CABLE	BLACK	250 FT
PRE20R250	#2/0 REEL WELDING CABLE	RED	250 FT
PRE20	#2/0 REEL WELDING CABLE	BLACK	500 FT
PRE20BLUE*	#2/0 REEL WELDING CABLE	BLUE	500 FT
PRE20G*	#2/0 REEL WELDING CABLE	GREEN	500 FT
PRE200*	#2/0 REEL WELDING CABLE	ORANGE	500 FT
PRE20P*	#2/0 REEL WELDING CABLE	PINK	500 FT
PRE20R	#2/0 REEL WELDING CABLE	RED	500 FT
PRE20B1000	#2/0 REEL WELDING CABLE	BLACK	1000 FT
PRE30B250	#3/0 REEL WELDING CABLE	BLACK	250 FT
PRE30	#3/0 REEL WELDING CABLE	BLACK	500 FT

*10,000FT MOQ Custom cut lengths available with MOQ

(Continued on next page)

WWW.TECHNIWELDUSA.COM



PRE30BLUE*	#3/0 REEL WELDING CABLE	BLUE	500 FT
PRE30R	#3/0 REEL WELDING CABLE	RED	500FT
PRE30B1000	#3/0 REEL WELDING CABLE	BLACK	1000 FT
PRE40B250	#4/0 REEL WELDING CABLE	BLACK	250 FT
PRE40	#4/0 REEL WELDING CABLE	BLACK	500 FT
PRE40R	#4/0 REEL WELDING CABLE	RED	500 FT
PRE40B1000	#4/0 REEL WELDING CABLE	BLACK	1000 FT

Cable Sections No Attachments

Item Number	Cable	Color	Length
BOX4S50PNE	#4 BOXED SECTION PRE4 NO ENDS	BLACK	50 FT
TEC4S60PNE	#4 SECTION PRE4 NO ENDS	BLACK	60 FT
BOX2S50PNE	#2 BOXED SECTION PRE2 NO ENDS	BLACK	50 FT
TEC2S50PNE	#2 SECTION PRE2 NO ENDS	BLACK	50 FT
TEC2S50PNER	#2 SECTION PRE2 NO ENDS	RED	50 FT
TEC2S100PNE	#2 SECTION PRE2 NO ENDS	BLACK	100 FT
TEC1S40PNE	#1 SECTION PRE1 NO ENDS	BLACK	40 FT
BOX1S50PNE	#1 BOXED SECTION PRE1 NO ENDS	BLACK	50 FT
TEC1S50PNE	#1 SECTION PRE1 NO ENDS	BLACK	50 FT
TEC1S100PNE	#1 SECTION PRE1 NO ENDS	BLACK	100 FT
TEC10S10PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	10 FT
BOX10S50PNE	#1/0 BOXED SECTION PRE10 NO ENDS	BLACK	50 FT
TEC10S50PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	50 FT
TEC10S75PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	75 FT
TEC10S100PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	100 FT
TEC10S120PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	120 FT
TEC10S150PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	150 FT
TEC10S200PNE	#1/0 SECTION PRE10 NO ENDS	BLACK	200 FT
BOX20S50PNE	#2/0 BOXED SECTION PRE20 NO ENDS	BLACK	50 FT
TEC20S50PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	50 FT
TEC20S75PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	75 FT
TEC20RS100PNE	#2/0 SECTION PRE20 NO ENDS	RED	100 FT
TEC20S100PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	100 FT
TEC20S200PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	200 FT
TEC20S300PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	300 FT
TEC20S350PNE	#2/0 SECTION PRE20 NO ENDS	BLACK	350 FT
TEC30S50PNE	#3/0 SECTION PRE30 NO ENDS	BLACK	50 FT
TEC30S100PNE	#3/0 SECTION PRE30 NO ENDS	BLACK	100 FT
TEC40S100PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	100 FT
TEC40S120PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	120 FT
TEC40S125PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	125 FT
TEC40S150PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	150 FT
TEC40S160PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	160 FT
TEC40S280PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	280 FT
TEC40S300PNE	#4/0 SECTION PRE40 NO ENDS	BLACK	300 FT









9

*10,000FT MOQ Custom cut lengths available with MOQ

(TECHNIWELDUSA)



ASCRFBD10



ASCRFBSS10



ASCRFBSSET10



ASCRMODV10



ASCRBT

10

ARC Star™ Revolution Lead Reels

Arc Star[™] Revolution Lead Reels! A revolutionary high quality yet low cost lead reel that will surely change a welder's experience. By bringing affordable lead reels to market now even the "helpers" will have a lead reel. With heavy duty powder coated paint job and premium construction the Arc Star[™] lead reels are sure to impress even the most critical rig welders. All this at a price point nearly half of the competition! Don't miss out on being part of the revolution! Features:

- Stays connected to the welder at all times. "Live Reel Setup"
- Heavy-duty manual friction brake is adjustable, allows the user to set tension and prevents free spooling of leads during roll out
 Comes standard with 400 amp spool isolators
- Heavy-duty, all-steel construction
- Ball bearing spools

- Locking pull pins secure cables while not in use
- Vented spool design allows for free air flow over your head to aid in cooling
- Replacement parts available
- · Powder coated for a lasting finish
- All hardware is zinc-coated Grade 5 steel

Complete Reels

Item Number	Description	Cable Capacity (Per Spool)
ASCRFBD10	10" DOUBLE CABLE REELS WITH FIXED BASE	150' OF 1/0 OR 125' OF 2/0 CABLE
ASCRFBD10T	10" DOUBLE CABLE REELS WITH FIXED BASE, 12° TILT	150' OF 1/0 OR 125' OF 2/0 CABLE
ASCRFBD12	12" DOUBLE CABLE REELS WITH FIXED BASE	200' OF 1/0 OR 175' OF 2/0 CABLE
ASCRFBD12T	12" DOUBLE CABLE REELS WITH FIXED BASE, 12° TILT	200' OF 1/0 OR 175' OF 2/0 CABLE
ASCRSBD10	10" DOUBLE CABLE REELS WITH SWIVEL BASE	150' OF 1/0 OR 125' OF 2/0 CABLE
ASCRSBD12	12" DOUBLE CABLE REELS WITH SWIVEL BASE	200' OF 1/0 OR 175' OF 2/0 CABLE
ASCRFBSS10	10" SIDE-BY-SIDE CABLE REELS WITH FIXED BASE	150' OF 1/0 OR 125' OF 2/0 CABLE
ASCRFBSS12	12" SIDE-BY-SIDE CABLE REELS WITH FIXED BASE	200' OF 1/0 OR 175' OF 2/0 CABLE
ASCRFBSSET10	10" CABLE REELS, 1 SET OF 2 REELS WITH FIXED BASE	150' OF 1/0 OR 125' OF 2/0 CABLE
ASCRFBSSET12	12" CABLE REELS, 1 SET OF 2 REELS WITH FIXED BASE	200' OF 1/0 OR 175' OF 2/0 CABLE

Modular Reels and Stands

Item Number	Description
ASCRMODV10	REVOLUTION 10" MODULAR VERTICAL CABLE REEL
ASCRMODV12	REVOLUTION 12" MODULAR CABLE REEL
ASCRBSS	REVOLUTION MODULAR SIDE BY SIDE BASE
ASCRBT	REVOLUTION MODULAR TILTED BASE
ASCRBV	REVOLUTION MODULAR VERTICAL BASE
ASCRSTAND	REVOLUTION LEAD REEL STAND 18" HIGH

Accessories & Replacement Parts

Item Number	Description
ASCRCOVERFBD	RAIN COVER FOR MODELS: ASCRFBD10 & 12, ASCRSBD10 & 12
ASCRCOVERFBS	RAIN COVER FOR FIXED SINGLE MODELS: ASCRFBSSET10 & SET12
ASCRCOVERFBSS	RAIN COVER FOR FIXED SIDE BY SIDE MODELS: ASCRFBSS10 & 12
ASCRBOIS	.55 BOLT ISOLATORS FOR REVOLUTION LEAD REELS
ASCRHW380.75	BOLT (INCLUDES NUT) FOR CABLE CONNECTION TO DISC
ASCRHW381.25	REPLACEMENT BREAK BOLT (INCLUDES NUT)
ASCRHW122.0FT	BOLT KIT (INCLUDES NUTS AND WASHERS) FOR CABLE CONNECTION TO THE FRAME
ASCRHW381.5PT	BOLT KIT (INCLUDES NUTS AND WASHERS) FOR SPOOL ISOLATORS
ASCRKNOBB	BLACK HAND KNOB FOR REVOLUTION LEAD REEL
ASCRKNOBR	RED HAND KNOB FOR REVOLUTION LEAD REELS
ASCRPPKIT	REPLACEMENT PIN FOR REVOLUTION LEAD REELS (INCLUDES SPRING, WASHER, SPRING PIN)
ASCRSPIS600	SPIS600 600 AMP SPOOL ISOLATOR FOR REVOLUTION REELS

REVOLUTION HOSE REELS COMING SOON!

WWW.TECHNIWELDUSA.COM



ARC Star[™] Cable Connectors

ARC Star[™] cable connectors are designed to efficiently conduct the current through a detachable type connector. Brass bodies are precision machined from heavy specially shaped brass extrusion. The positive lock-tight action known as, Cam action design, allows lock in with a twist and pulls the two halves together tightly. Connector covers are resistant to heat, cold, abrasion, ozone, oils & solvents. Tapered ends lock out moisture, oil and dirt. Connector covers are specially compounded to be flame retardant. Terminal connectors replace cable lugs for fixture to machines allowing for quick disconnect of cables.

Features:

- Premium quality brass connectors
- Machined from brass alloy bar stock
- Interchangeable with Tweco connectors
- Heat and oil resistant covers



RTP1MBP

Tweco Style Cable Connectors

Item Number	Description
RTP1MBPF	#1 TWECO STYLE MBP CABLE CONNECTOR FEMALE END
RTP1MBPM	#1 TWECO STYLE MBP CABLE CONNECTOR MALE END
RTP1MBP	#1 TWECO STYLE MBP CABLE CONNECTOR SET
RTP1MBPB	#1 TWECO STYLE MBP CABLE CONNECTOR SET (50 PAIRS/CASE)
RTP2MBPF	#2 TWECO STYLE MBP CABLE CONNECTOR FEMALE END
RTP2MBPM	#2 TWECO STYLE MBP CABLE CONNECTOR MALE END
RTP2MBP	#2 TWECO STYLE MBP CABLE CONNECTOR SET
RTP2MBPMB	#2 TWECO STYLE MBP CABLE CONNECTOR MALE (100 PAIRS/CASE)
RTP2MBPCS	#2 TWECO STYLE MBP CABLE CONNECTOR SET CLAM-SHELL
RTP2MBPB	#2 TWECO STYLE MBP CABLE CONNECTOR (50 PAIRS/CASE)
RTP21MBP	#2 TWECO STYLE MBP WHIP CABLE CONNECTOR SET
RTP21MBPMB	#2 TWECO STYLE MBP WHIP CABLE CONNECTOR SET (100 PAIRS/CASE)
RTP4MBPF	#4 TWECO STYLE MBP CABLE CONNECTOR FEMALE END
RTP4MBPM	#4 TWECO STYLE MBP CABLE CONNECTOR MALE END
RTP4MBPB	#4 TWECO STYLE MBP CABLE CONNECTOR SET (50 PAIRS/CASE)
RTP4MBP	#4 TWECO STYLE MBP CABLE CONNECTOR SET
RTP4MBPMB	#4 TWECO STYLE MBP CABLE CONNECTOR (100 PAIRS/CASE)
CCD3550MCS	DINSE CABLE CONNECTOR MALE 3550-M (#4-1/0)
CCD5070F	DINSE CABLE CONNECTOR FEMALE 5070-F (1/0-2/0)
CCD5070M	DINSE CABLE CONNECTOR MALE 5070-M (1/0-2/0)
CCD5070	DINSE CABLE CONNECTOR 5070 SET (1/0-2/0)

RTP2MBP







RTPLC40

11

(Continued on next page)

CABLE SPLITTER/CONNECTOR, 1 MALE , TWO FEMALE DINSE STYLE ADAPTER

LENCO STYLE CABLE CONNECTORS LC-40 BOXED

Item Number

RTPLC40

RTPLTC40

Lenco Style Cable Connectors

Description







RTP3040H



TECK4





CCC18712H

12

ARC Star™ Cable Lugs

Features:

· Premium quality brass connectors

Interchangeable with Tweco connectors

· Machined from brass alloy bar stock · Heat and oil resistant covers

Item Number	Description
RTP1020	CABLE LUG FOR 1/0-2/0 CABLE
RTP2AF	2AF FEMALE TERMINAL LUG - 45° ANGLE (10/CASE)
RTP20F	20F FEMALE TERMINAL LUG - 180° OFF SET
RTP3040	CABLE LUG FOR 3/0-4/0 CABLE (10/CASE)
RTP62	DESCRIPTION SHOULD BE CABLE LUG #6 TO #1 CABLE (10/CASE)
RTP60H	CABLE LUG #6 - #1 CABLE - HAMMER STYLE (10/CASE)
RTP1020H	CABLE LUG #1/0 - #2/0 - HAMMER STYLE
RTP3040H	CABLE LUG #3/0 - #4/0 - HAMMER STYLE (10/CASE)
TECCM20	CRIMPING TOOL, SECURES CABLE ONTO LUG

ARC Star[™] Gouging Torch & Carbons

ARC Star's™ copper-coated gouging carbons contain a specially formulated blend of graphite and carbon, which produces one of the most efficient performance of metal removal in today's market place.

Gouging Torch

Features: Tested to EN 60974-7 CE

- 7ft Cord (2.1M)
- Compatible with Arc Air™ replacement parts and insulators
- · High-temperature resistant handle with high quality copper alloy internals

Item Number Description

ARC STAR[™] TYPE 4 ARC GOUGING TORCH

Gouging Carbons

Features:

TECK4

- · Copper coating improves conductivity offering more efficient and cooler operation
- · An electric arc is created which melts away the metal, uses compressed air to blow the molten metal out of the groove
- Typical chemistry, 80% graphite and 20% copper

· Our high quality raw materials help minimized generation of dust and gases

Item Number	Description	Min-Max Amperage	Pkg Qty
CCC12512	1/8" X 12" GOUGING CARBON	60-90	100
CCC15612	5/32" X 12" GOUGING CARBON	90-150	100
CCC18712	3/16" X 12" GOUGING CARBON	200-250	50
CCC18712H	3/16" X 12" HOLLOW GOUGING CARBON	200-250	50
CCC31212	5/16" X 12" GOUGING CARBON	350-450	50
CCC31212H	5/16" X 12" HOLLOW GOUGING CARBON	350-450	50
CCC37512	3/8" X 12" GOUGING CARBON	450-600	50
CCC37512H	3/8" X 12" HOLLOW GOUGING CARBON	450-600	50
CCC37515612	3/8" X 5/32" X 12" FLAT CARBON ROD	450-600	50

(Continued on next page)



CCC50012	1/2" X 12" GOUGING CARBON	800-1000	50
CCC50012H	1/2" X 12" HOLLOW GOUGING CARBON	800-1000	50
CCC62518712	5/8" X 3/16" X 12" FLAT GOUGING CARBON ROD	1000-1250	50
CCCJ37517	3/8" X 17" DCCC JOINTED GOUGING ROD	450-600	50
CCCJ50017	1/2" X 17" DCCC JOINTED GOUGING ROD	800-1000	50
CCCJ62517	5/8" X 17" DCCC JOINTED GOUGING CARBONS	1000-1250	50
CCCJ75017	3/4" X 17" DCCC JOINTED GOUGING CARBONS	1250-1600	50
CCCM71125	M-71 CHAMFER ROD 1/8" DIAMETER	60-90	10 LB PLASTIC TUBE
CCCM71156	M-71 CHAMFER ROD 5/32" DIAMETER	90-150	8 LB PLASTIC TUBE
CCCM71187	M-71 CHAMFER ROD 3/16" DIAMETER	200-250	1 LB PLASTIC TUBE



ARC Star[™] Canisters

_			
-03	tt i i	roo	24
CC	ιιu	100	ο.

- 1 Cap retention chain
- 2 Rubber O-ring for airtight seal 3 - Carrying Strap 5 - Embossed with a conversion table and ruler

4 - Belt clip	5 - Embossed with a conversion table and ruler		
Item Number	Description		
ASRGR100	RED 10# ELECTRODE HOLDER		
ASRGB100	BLUE 10# ELECTRODE HOLDER		
ASRGR300	RED 10# TIG ROD HOLDER		
ASRGB300	BLUE 10# TIG ROD HOLDER		



ASRGR100 & ASRGB100

ARC Star[™] Rap-Arounds

ARC Star's™ RAP-AROUND come in both Plain Edge and Tuff-Edge®. Tuff-Edge® feature covers the leading ruled edge with a tough, clear vinyl cover. The material is highly abrasion resistant, heat resistant, and adds extra long life to the product by protecting the ruled surface and the edge.

Item Number	Edge	Length
ASRA170	RAP-AROUND 170	6 FT
ASRA170TE	RAP-AROUND 170 TOUGH EDGE	6 FT
ASRA179	RAP-AROUND 179	9 FT
ASRA179TE	RAP-AROUND 179 TOUGH EDGE	9 FT



ASRA170



ARC Star[™] Rod Ovens

Features:

- Analog thermostats
- Each oven is tested and heated to rated temperature before being supplied
- Calibration Certificates are available upon request
- Stainless steel body ovens

- Voltages offered are: 110V and 220V
- High temperature resistant handle with High quality copper alloy internals
- Dual voltage ovens

- Digital temperature controllers
- Bench oven and flux oven models are fitted with mini -circuit breakers for safety
- All oven models are tested to BS 638.5 and EN 60974-1 norms

Portable Electrode Ovens

Type 1	 Dual voltage heating element operates between 100-240V while providing consistent oven temperature Steady state operation reduces power consumption Removable cord secured to oven by locking power inlet allows for easy replacement if damaged Insulated lid easily secures with a latch
Type 2	 Dual voltage heating element operates between 100-240V while providing consistent oven temperature Removable cord secured to oven by locking power inlet allows for easy replacement if damaged
Type 5/5A	 Wire wrapped heating elements provide consistent oven temperature Removable cord secured to oven by locking power inlet allows for easy replacement if damaged Carry handles or wheels and handle available



PARAMETERS	ASPE1	ASPE2 ASPE5		ASPE5A	
Electrode Capacity	10lbs	20lbs 50lbs		50lbs	
Heating Element	235W Wire Wrap	600W Wire Wrap 700W Wire Wrap		700W Wire Wrap	
Working Voltage		AC 240V AC/DC 60V-120V			
Temperature Range	300°F (150°C)	120°F-300°F (50°C -150°C) 120°F-300°F (50°C -150°C) 1		120°F-300°F (50°C -150°C)	
Thermostat	Preset	Adjustable Thermostat with High Limit Switch			
Electrode Length	19.7" (500mm)	19.7" (500mm) 19.7" (500mm)		19.7" (500mm)	
Weight	9.37lbs	11.24lbs 28.9lbs		43.54lbs	
Overall Size (L x W x H)	180 x 150 x 580mm	215 x 180 x 590mm 360 x 285 x 580mm 400 x 340 x 6		400 x 340 x 690mm	



Bench Ovens & Electrode Ovens

	Ē					
						N.
PARAMETERS	TEC15I	TEC501	EQ150SIDT	EQ250DT3	EQ250DDT3	EQ450DT3
Electrode Capacity	20lbs	50lbs	150lbs	250lbs	250lbs	450lbs
Max. Electrode Size	18" (457mm)	18" (457mm)				
Working Voltage	110V, 220V (Standard)	110V, 220V (Standard)				
Wattage	250 Watts	350 Watts	750 Watts	1000 Watts	1000 Watts	2000 Watts
Supply Cable Size	18 AWG x 3C	18 AWG x 3C	14 AWG x 3C	14 AWG x 3C	14 AWG x 3C	2.5mm ² x 3C
Temperature Range	Max. 300°F (150°C)	Max. 572°F (300°C)	Max. 572°F (300°C)	Max. 572°F (300°C)	Max. 572°F (300°C)	Max. 572°F (300°C)
Thermostat	Analog	Analog	Analog		Digital temperature controlle	r
Thermometer	None	None	None		Digital temperature controlle	
Heating Element Type	Mica band type	Mica band type	'U' shape tubular	'U' shape tubular	'U' shape tubular	'U' shape tubular
Insulation	25mm ceramic wool	25mm ceramic wool	2" ceramic wool	2" ceramic wool	2" ceramic wool	3" ceramic wool
Outer Size (mm)	590 x 180 x 180	570 x 232 x 232	L610 x W560 x H545	L610 x W665 x H595	L610 x W665 x H595	L610 x W705 x H735
Inner Chamber (mm)	480 x 110 x 110	460 x 150 x 150	L500 x W245 x H270	L500 x W350 x H320	L500 x W350 x H320	L520 x W430 x H420
Inner Basket	Yes	4 Section	2 Section	2 Section	2 Section	4 Section
Body			Pre-galvanized steel	sheet, powder coated		
Basket Hooks	Yes	Yes	None	None	None	None
Tilt Stand Feature	Yes	Yes	No	No	No	No
Light Indicator	Yes	Yes	Yes	Yes	Yes	Yes
Shoes	Yes	Yes	Metal	Metal	Metal	Metal
Shape	Square	Round	Square	Square	Square	Square
Handle	Fixed Handle	Fixed Handle	None	None	None	None
Wheel	None	None	None	None	None	None
Net Weight	19.2lbs	29.11bs	92.6lbs	105.8lbs	123.5lbs	147.7lbs



FOR ALL YOUR FIRE RESISTANT CLOTHING, HELMETS, AND SAFETY RELATED PRODUCTS

Quality Standards

Techniweld USA's, Armour Guard™



- Helmets & Accessories 17-19
 - Filter Plates 19-21
 - Safety Glasses 21
 - Face Shields 22
 - Ear Plugs 22
- Fire Resistant Clothing 22-23
- Welding, Drivers & Work Gloves 24-25
 - Anti-Fatigue Mats 26
 - Rolled Goods 26-27
 - Protective Blankets **27**
 - Welding Curtains 28
- Clear Safety Curtains & Divider **28**
 - Tarps 28-29
 - Cable Ties 29
 - Respirators 29



Armour Guard[™] Helmets & Accessories

TITAN Welding Helmet

Features:

- Clear Blue View Technology
- UV/IR protection Shade DIN 16
- · Switching Speed: 0.1 ms
- Helmet Material: High impact Nylon
- Total Weight: 1.25 lb (20 oz, 567 g)
- 3 Year Warranty

- · 6 Independent Arc Sensors
- CE Optical Class: 1/1/1/1
- · Delay can be adjusted from the inside
- · Variables shades 5-8 for Grinding and Cutting and shades 9-14 for Arc Welding
- · Dual strap headgear with torque ratchet



AGTITAN

Item Number	Lens Color	ADF Size	Viewing Field	Shell Color
AGTITAN	CLEAR BLUE VIEW	4.5" X 5.25" (115MM X 132MM)	3.5" X 3.85" (89MM X 98MM)	BLACK

GLADIATOR Welding Helmet

-eatures:			
Clear Blue	View	Techno	logy

- UV/IR protection Shade DIN 16
- CE Optical Class: 1/1/1/2
- Total Weight: 1.036 lb (16.58 oz, 470 g)
- Dual strap headgear with torque ratchet
- 4 Independent Sensors Clear State: Shade 4
- Helmet Material: High impact Nylon
- Switching Speed: 0.3 ms · Delay can be adjusted from the inside

Flip Front

• 3 Year Warranty Grind Mode & Shade 9-13 Welding Mode Dial



Item Number Lens Color **Viewing Field** Shell Color ADF Size AGGLADIATOR CLEAR BLUE VIEW 4.33" X 3.54" (90MM X 110MM) 2.08" X 3.85" (53 MM X 98 MM) BLACK

OLYMPUS Welding Helmet

Features:

Features:

- Clear Blue View Technology
- · Variables shades 5-8 for Grinding and Cutting and shades 9-13.5 for Arc Welding
- 4 Independent Arc Sensors
- Total Weight: 1.036 lb (16.58 oz, 470 g)

- Switching Speed: 0.1 ms
- Meets ANSI Z87.1-2015 Standards
- 3 Year Warranty
- · Headgear with torque ratchet

Item Number	Lens Color	ADF Size	Viewing Field	Shell Color
AGOLYMPUS	CLEAR BLUE VIEW	4.33" X 3.54" (90MM X 110MM)	2.08" X 3.85" (53 MM X 98 MM)	BLACK



AGOLYMPUS

KNIGHT Welding Helmet

Clear Blue View Technology	4 Independent Sensors
UV/IR protection Shade DIN 16	CE Optical Class: 1/1/1/2
Switching Speed: 0.1 ms	Delay can be adjusted from the inside
Helmet Material: High impact Nylon	• Variables shades 5-8 for Grinding and Cutting and shades 9-13 for Arc Welding
• Total Weight: 1.25 lb (20 oz, 567 g)	Headgear with torque ratchet

3 Year Warranty

Item Number	Lens Color	ADF Size	Viewing Field	Shell Color
TWWH03	CLEAR BLUE VIEW	4.5" X 5.25" (115MM X 132MM)	2.64" X 3.89" (67MM X 99MM)	BLACK

(Continued on next page)



TWWH03



TECHNIWELDUSA



AGSPARTAN



AG2X4WH



AGHOTHEAD



TWWHTK04

18

SPARTAN Welding Helmet

Features:

- Clear Blue View Technology
 UV/IR protection Shade DIN 16
- Switching Speed: 0.3 ms
- Helmet Material: High impact Nylon
- Total Weight: 1.036 lb (16.58 oz, 470 g)
- 2 Year Warranty

- 2 Independent Sensors
 Clear State: Shade 4
- CE Optical Class: 1/1/1/2
- Delay can be adjusted from the inside
- Grind Mode & Shade 9-13 Welding Mode Dial
- Headgear with torque ratchet

AGSPARTAN	CLEAR BLUE VIEW	4.33" X 3.54" (90MM X 110MM)	1.653" X 3.622" (42 MM X 92 MM)	BLACK
Item Number	Lens Color	ADF Size	Viewing Field	Shell Color
	у	· neaugear with torque ratchet		

GRUNT Welding Helmet

Features:

- Reinforced Thermoplastic Hood

· Easy to use removable flip up filter plate design

Lightweight at 17.9 Ounces (510 Grams)

Item Number	Lens Color	Lens Dimensions	Sensor	Shell Color
AG2X4WH	COMPATIBLE WITH THE ARMOUR GUARD™ SEER LENS (STANDARD VIEW)	2 IN X 4.25 IN (51 MM X 108 MM)	N/A	BLACK
AG4X5WH	COMPATIBLE WITH THE ARMOUR GUARD™ SEER LENS (LARGE VIEW)	4 IN X 4 IN (114 MM X 133 MM)	N/A	BLACK

HOT HEAD Helmet Ventilation System

Features:

• Reduces fumes by up to 90%

- · Time saved not having to clean the lens or wipe away sweat
- Healthier breathing environment due to less fumes
- Lightweight device reduces fatigue
- $\boldsymbol{\cdot}$ Improves visibility through the helmet reduces errors
- Comfortable working environment improves morale
- No cords or air hose to deal with
- · Portable & fits any welding helmet

Item Number	Lens Color	Pkg Qty
AGHOTHEAD	ARMOUR GUARD HOT HEAD HELMET VENTILATION AND COOLING SYSTEM	1
AGHOTHEADCLIP	CARBON FIBER CLIP FOR ARMOUR GUARD HOT HEAD	1
AGHOTHEADFILTER	REPLACEMENT FILTERS WITHOUT HOUSING FOR ARMOUR GUARD HOT HEAD	10
AGHOTHEADFILTERWH	REPLACEMENT FILTERS WITH HOUSING FOR ARMOUR GUARD HOT HEAD	3
AGHOTHEADCABLE	CHARGING CABLE FOR ARMOR GUARD HOT HEAD	1
AGHOTHEADPLUG	WALL OUTLET ADAPTER FOR ARMOUR GUARD HOT HEAD	1
AGHOTHEADBUMPONS	BUMP ONS FOR ARMOR GUARD HOT HEAD	1

Helmet Accessories & Replacement Parts

Item Number	Description	Pkg Qty
TWWH03IL	INNER PROTECTIVE LENS FOR THE KNIGHT (TWWH03) HELMET	5
TWWH06IL	INNER PROTECTIVE LENS FOR TWWH06 HELMET, THE OLYMPUS (AGOLYMPUS) AND GLADIATOR HELMET (AGGLADIATOR)	5
TWWH060L	OUTER PROTECTIVE LENS FOR TWWH06 HELMET, THE OLYMPUS (AGOLYMPUS), THE SPARTAN (AGSPARTAN), AND THE GLADIATOR HELMET (AGGLADIATOR)	5
AGTITANIL	INNER PROTECTIVE LENS FOR THE TITAN (AGTITAN) HELMET	5
AGTITANOL	OUTER PROTECTIVE LENS FOR THE TITAN (AGTITAN) HELMET	5
AGGLADIATORVISOR	REPLACEMENT VISOR FOR THE GLADIATOR (AGGLADIATOR) HELMET	2
AGSPARTANIL	INNER PROTECTIVE LENS FOR THE SPARTAN (AGSPARTAN) HELMET	5
TWCHINBIB	LEATHER CHIN BIB FOR ALL ARMOUR GUARD HELMETS	1
	(Continued on next page)	

ARMOUR GU*RD

TWWHBATT2032	ADF REPLACEMENT BATTERIES FOR TWWH06 (PACK OF 2)	2
TWWHBATT2450	ADF REPLACEMENT BATTERIES FOR TWWH03 (PACK OF 2)	2
TWWHCLOOP	CAP ADAPTOR LOOP FOR ALL ARMOUR GUARD HELMETS	1
TWWHSWEATBAND	SWEATBAND FOR ALL HEADGEAR	2
TWWHTK04	HEADGEAR WITH TORQUE RATCHET	1
AGHGDS	DUAL STRAP HEADGEAR WITH TORQUE RATCHET	1



AGHGDS

SEER Auto-Darkening Filter with Clear Blue View Technology

Features:

- Incredible Clarity
- 2 Independent Arc Sensors
- EQC Quick Change

Auto-On/Auto-Off Circuitry
 Meets ANSI 287.1-2015 and CE 379

Enhanced Definition

Item Number	Description	Lens	Shade	Size	Pkg Qty
ASPSEER2X4H09EA	SEER AUTO DARKENING FILTER	CLEAR BLUE VIEW	SHADE 9	2 IN X 4-1/4 IN	1
10 X ASPSEER2X4H09EA	SEER ADF POS BOX DISPLAY	CLEAR BLUE VIEW	SHADE 9	2 IN X 4-1/4 IN	10
ASPSEER2X4H10EA	SEER AUTO DARKENING FILTER	CLEAR BLUE VIEW	SHADE 10	2 IN X 4-1/4 IN	1
10 X ASPSEER2X4H10EA	SEER ADF POS BOX DISPLAY	CLEAR BLUE VIEW	SHADE 10	2 IN X 4-1/4 IN	10
ASPSEER2X4H11EA	SEER AUTO DARKENING FILTER	CLEAR BLUE VIEW	SHADE 11	2 IN X 4-1/4 IN	1
10 X ASPSEER2X4H11EA	SEER ADF POS BOX DISPLAY	CLEAR BLUE VIEW	SHADE 11	2 IN X 4-1/4 IN	10
ASPSEER2X4H12EA	SEER AUTO DARKENING FILTER	CLEAR BLUE VIEW	SHADE 12	2 IN X 4-1/4 IN	1
10 X ASPSEER2X4H12EA	SEER ADF POS BOX DISPLAY	CLEAR BLUE VIEW	SHADE 12	2 IN X 4-1/4 IN	10

SEER XL Auto-Darkening Filter with Clear Blue View Technology

Incredible Clarity

• 4 Independent Arc Sensors

Designed for Welding < 250 Amp

ASPSEER2X4H09EA



ASPSEER2X4H10-10



AGSEERXLEA

• Meets ANSI Z87.1-2015 and CE 379 - Inner and Outer Cover Plates 1 Year Limited Warranty Item Number Description Lens Shade Size Pkg Qty SEER XL AUTO DARKENING FILTER CLEAR BLUE VIEW AGSEERXLEA SHADE 10 & 11 4-1/2 IN X 5-1/4 IN 1 **10 X AGSEERXLEA** SEER XL ADF POS BOX DISPLAY CLEAR BLUE VIEW SHADE 10 & 11 4-1/2 IN X 5-1/4 IN 10 SEER XL REPLACEMENT INNER AGSEERXLIL 4-1/2 IN X 5-1/4 IN 2 LENS (PACK OF 2)

Armour Guard[™] Filter Plates

Features:

Features:

Clear Blue View Technology

Reduced Eye and Neck Fatigue

· Sensitivity Hi/lo Button Adjustment

Premium Optical Clarity

Universal Compatibility

Meets or exceeds ANSI Z87.1, CE, and other international Certification specifications
 Made from Impact resistant materials

Item Number	Description	Shade	Size
AGLP2H05	POLYCARBONATE FILTER LENS	SHADE 5	2 IN X 4-1/4 IN
AGLP2H06	POLYCARBONATE FILTER LENS	SHADE 6	2 IN X 4-1/4 IN
AGLP2H08	POLYCARBONATE FILTER LENS	SHADE 8	2 IN X 4-1/4 IN
AGLP2H09	POLYCARBONATE FILTER LENS	SHADE 9	2 IN X 4-1/4 IN
AGLP2H10	POLYCARBONATE FILTER LENS	SHADE 10	2 IN X 4-1/4 IN
AGLP2H11	POLYCARBONATE FILTER LENS	SHADE 11	2 IN X 4-1/4 IN
AGL2CP060	POLYCARBONATE COVER LENS	CLEAR	2 IN X 4-1/4 IN
AGL2CR39	CR39° POLYCARBONATE COVER LENS	CLEAR	2 IN X 4-1/4 IN

AGL2GH10

(Continued on next page)



Enhanced Definition

Shade 10/11 Button Adjustment

Auto-On/Auto-Off Circuitry

WWW.TECHNIWELDUSA.COM

TECHNIWELDUSA

AGL4H05



AGLP2H10



AGL50CG



AGLMAG200G

AGL2TC	POLYCARBONATE SAFETY PLATE	CLEAR	2 IN X 4-1/4 IN
AGL2GGH09	GOLD GLASS FILTER LENS	SHADE 9	2 IN X 4-1/4 IN
AGL2GGH10	GOLD GLASS FILTER LENS	SHADE 10	2 IN X 4-1/4 IN
AGL2GGH11	GOLD GLASS FILTER LENS	SHADE 11	2 IN X 4-1/4 IN
AGL2GH08	CLEAR GLASS COVER LENS	SHADE 8	2 IN X 4-1/4 IN
AGL2GH09	CLEAR GLASS COVER LENS	SHADE 9	2 IN X 4-1/4 IN
AGL2GH10	CLEAR GLASS COVER LENS	SHADE 10	2 IN X 4 1/4 IN
AGL2GH11	CLEAR GLASS COVER LENS	SHADE 11	2 IN X 4-1/4 IN
AGL2GH12	CLEAR GLASS COVER LENS	SHADE 12	2 IN X 4-1/4 IN
AGL2H03	GLASS FILTER LENS	SHADE 3	2 IN X 4-1/4 IN
AGL2H04	GLASS FILTER LENS	SHADE 4	2 IN X 4-1/4 IN
AGL2H05	GLASS FILTER LENS	SHADE 5	2 IN X 4-1/4 IN
AGL2H06	GLASS FILTER LENS	SHADE 6	2 IN X 4-1/4 IN
AGL2H07	GLASS FILTER LENS	SHADE 7	2 IN X 4-1/4 IN
AGL2H08	GLASS FILTER LENS	SHADE 8	2 IN X 4-1/4 IN
AGL2H09	GLASS FILTER LENS	SHADE 9	2 IN X 4-1/4 IN
AGL2H10	GLASS FILTER LENS	SHADE 10	2 IN X 4-1/4 IN
AGL2H11	GLASS FILTER LENS	SHADE 11	2 IN X 4-1/4 IN
AGL2GGH12	GLASS FILTER LENS	SHADE 12	2 IN X 4-1/4 IN
AGL2H12	GLASS FILTER LENS	SHADE 12	2 IN X 4-1/4 IN
AGL2H13	GLASS FILTER LENS	SHADE 13	2 IN X 4-1/4 IN
AGL2H14	GLASS FILTER LENS	SHADE 14	2 IN X 4-1/4 IN
AGL2CG	GLASS LENS	CLEAR	2 IN X 4-1/4 IN
AGL2SP	SAFETY PLATE PAPER SLEEVE	N/A	2 IN X 4-1/4 IN
AGLMAG075G	0.75 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG100G	1.00 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG125G	1.25 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG150G	1.50 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG175G	1.75 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG200G	2.00 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG225G	2.25 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG250G	2.50 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG300G	3.00 GLASS MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG75	0.75 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG100	1.00 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG125	1.25 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG150	1.50 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG175	1.75 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG200	2.00 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG225	2.25 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG250	2.50 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLMAG300	3.00 POLYCARBONATE MAGNIFYING LENS	N/A	2 IN X 4-1/4 IN
AGLP4H09	POLYCARBONATE FILTER LENS	SHADE 9	4-1/2 IN X 5-1/4 IN
AGLP4H10	POLYCARBONATE FILTER LENS	SHADE 10	4-1/2 IN X 5-1/4 IN
AGLP4H11	POLYCARBONATE FILTER LENS	SHADE 11	4-1/2 IN X 5-1/4 IN
AGLP4H12	POLYCARBONATE FILTER LENS	SHADE 12	4-1/2 IN X 5-1/4 IN
AGL4CP060	POLYCARBONATE COVER LENS	CLEAR	4-1/2 IN X 5-1/4 IN
AGL4CR39	CR39® POLYCARBONATE COVER LENS	CLEAR	4-1/2 IN X 5-1/4 IN
AGL4TC	POLYCARBONATE SAFETY PLATE	CLEAR	4-1/2 IN X 5-1/4 IN

(Continued on next page)

ARMOUR GU*RD

AGL4GGH09	GOLD GLASS LENS	SHADE 09	4-1/2 IN X 5-1/4 IN
AGL4GGH10	GOLD GLASS LENS	SHADE 10	4-1/2 IN X 5-1/4 IN
AGL4GGH11	GOLD GLASS LENS	SHADE 11	4-1/2 IN X 5-1/4 IN
AGL4GGH12	GOLD GLASS LENS	SHADE 12	4-1/2 IN X 5-1/4 IN
AGL4GH08	GOLD PLASTIC OMNI VIEW LENS	SHADE 8	4-1/2 IN X 5-1/4 IN
AGL4GH09	GOLD PLASTIC OMNI VIEW LENS	SHADE 9	4-1/2 IN X 5-1/4 IN
AGL4GH10	GOLD PLASTIC OMNI VIEW LENS	SHADE 10	4-1/2 IN X 5-1/4 IN
AGL4GH11	GOLD PLASTIC OMNI VIEW LENS	SHADE 11	4-1/2 IN X 5-1/4 IN
AGL4GH12	GOLD PLASTIC OMNI VIEW LENS	SHADE 12	4-1/2 IN X 5-1/4 IN
AGL4H05	GLASS FILTER LENS	SHADE 5	4-1/2 IN X 5-1/4 IN
AGL4H06	GLASS FILTER LENS	SHADE 6	4-1/2 IN X 5-1/4 IN
AGL4H07	GLASS FILTER LENS	SHADE 7	4-1/2 IN X 5-1/4 IN
AGL4H08	GLASS FILTER LENS	SHADE 8	4-1/2 IN X 5-1/4 IN
AGL4H09	GLASS FILTER LENS	SHADE 9	4-1/2 IN X 5-1/4 IN
AGL4H10	GLASS FILTER LENS	SHADE 10	4-1/2 IN X 5-1/4 IN
AGL4H11	GLASS FILTER LENS	SHADE 11	4-1/2 IN X 5-1/4 IN
AGL4H12	GLASS FILTER LENS	SHADE 12	4-1/2 IN X 5-1/4 IN
AGL4H13	GLASS FILTER LENS	SHADE 13	4-1/2 IN X 5-1/4 IN
AGL4H14	GLASS FILTER LENS	SHADE 14	4-1/2 IN X 5-1/4 IN
AGL4SP	SAFETY PLATE PAPER SLEEVE	N/A	4-1/2 IN X 5-1/4 IN
AGL50CG	GLASS LENS	CLEAR	50 MM
AGL50H04	FILTER LENS	SHADE 4	50 MM
AGL50H05	FILTER LENS	SHADE 5	50 MM





ASP25671



ASP25679

Armour Guard[™] Safety Glasses

Economically priced with style, comfort, durability, and quality needed to keep your eyes protected.

VIKING Safety Glasses

Features:

- such as clear, smoke, IRUV shade 5.0, and indoor/outdoor
- · Extra long neck cord included with every pair
- · Incredible flexibility and durability for longer life expectancy
- Glossy, lightweight black frames with a wide variety of lens colors
 Lens coated with both anti-fog and anti-scratch for longer life expectancy
 - · Cushioned nosepiece for comfort and non-slip security

Item Number	Frame/Temples Color	Lens Tint	Coating/Shade	Pkg Qty
ASP22475	BLACK	SMOKE	ANTI-FOG/ANTI-SCRATCH	12
ASP25671	BLACK	IRUV SHADE 5	ANTI-FOG/ANTI-SCRATCH	12
ASP25679	BLACK	CLEAR	ANTI-FOG/ANTI-SCRATCH	12
ASP25685	BLACK	INDOOR/OUTDOOR	ANTI-FOG/ANTI-SCRATCH	12

SAVAGE Safety Glasses

Features:

lt A

A A

- Meets and exceeds all ANSI Z87.1 specifications
- · Strong, lightweight polycarbonate lens with a wide variety of lens colors such as clear, smoke, and indoor/outdoor
- Triple temple support for extra stability
- · Incredible flexibility and durability for longer life expectancy
- Filters 99% of UV radiation
- · Spatula Lanyard Hole for security of safety glasses and convenience
- · Lens coated with anti-scratch for longer life expectancy

em Number	Frame/Temples Color	Lens Tint	Coating/Shade	Pkg Qty
SP25627	BLACK	CLEAR	UNCOATED	12
SP25631	BLACK	SMOKE	UNCOATED	12
SP25638	BLACK	INDOOR/OUTDOOR	UNCOATED	12



ASP25685







ASP25631



ASP25638

21

WWW.TECHNIWELDUSA.COM

TECHNIWELDUSA



FACE SHIELDS





AGEPOFBC



FR9JO



FR9B14

22

Armour Guard[™] Face Shields

Features: • Premium optical clarity

Universal compatibility

Meets or exceeds ANSI Z87.1, CE, and other international certification specifications

Item Number	Description	Color	Size
AGCUVECON8X12	UNBOUND VISOR	CLEAR	8 IN X 12 IN X 1/25 IN
AGCUVPREM8X15	UNBOUND HEAVY DUTY POLYCARBONATE VISOR	CLEAR	8 IN X 15 1/2 IN X 1/25 IN
AGCVECON9X15	BOUND VISOR	CLEAR	9 IN X 15 1/2 IN X 1/25 IN
AGCUVECON9X15	UNBOUND VISOR	CLEAR	9 IN X 15 1/2 IN X 1/25 IN
AGDGBVECON9X15	BOUND VISOR	DARK GREEN	9 IN X 15 1/2 IN X 1/25 IN
AGDGUVECON9X15	UNBOUND VISOR	DARK GREEN	9 IN X 15 1/2 IN X 1/25 IN
AGLGBVECON9X15	BOUND REPLACEMENT VISOR	LIGHT GREEN	9 IN X 15 1/2 IN X 1/25 IN
AGMGUVECON9X15	UNBOUND MEDIUM VISOR	MEDIUM	9 IN X 15 1/2 IN X 1/25 IN
AGS5BVECON9X15	BOUND VISOR	SHADE 5	9 IN X 15 1/2 IN X 1/25 IN
AGS5UVECON9X15	UNBOUND VISOR	SHADE 5	9 IN X 15 1/2 IN X 1/25 IN
AGCUVECON4199	UNBOUND FACESHIELD (FITS FIBRE METAL BROW GUARD)	CLEAR	9 IN X 15 1/2 IN X 1/25 IN

Armour Guard[™] Ear Plugs

Features:

Soft, non-allergenic foam plugs provide low pressure inside ears for all day comfort
 Suitable factorized and work places

Suitable for loud work places
 Bright color makes compliance checks easy

Item Number	Description	Color	Pkg Qty
AGEPGSC	SILICONE CORDED EAR PLUGS	GREEN	100
AGEPOFB	FOAM BULLET EAR PLUGS	ORANGE	200
AGEPOFBC	FOAM BULLET CORDED EAR PLUGS	ORANGE	100

Armour Guard[™] Fire Resistant Clothing

Armour Guard[™] by Techniweld USA is the ultimate fire Resistant option for green/orange clothing for the welding and manufacturing industries. Using our factory proprietary process we have created a soft, yet strong, 9oz/yd 100% cotton fire resistant sateen weave which withstands 50+ launderings.

Item Number	Description	Size	Color
FR9JS	9 OZ JACKET	SMALL	GREEN
FR9JM	9 OZ JACKET	MEDIUM	GREEN
FR9JL	9 OZ JACKET	LARGE	GREEN
FR9JXL	9 OZ JACKET	X-LARGE	GREEN
FR9JXXL	9 OZ JACKET	2X-LARGE	GREEN
FR9JXXXL	9 OZ JACKET	3X-LARGE	GREEN
FR9JXXXXL	9 OZ JACKET	4X-LARGE	GREEN
FR9JXXXXXL	9 OZ JACKET	5X-LARGE	GREEN
FR9JXXXXXL	9 OZ JACKET	6X-LARGE	GREEN
FR9JOS	9 OZ JACKET	SMALL	ORANGE
FR9JOM	9 OZ JACKET	MEDIUM	ORANGE
FR9JOL	9 OZ JACKET	LARGE	ORANGE

(Continued on next page)

ARMOUR GU*RD

FR9JOXL	9 OZ JACKET	X-LARGE	ORANGE
FR9JOXXL	9 OZ JACKET	2XX-LARGE	ORANGE
FR9J0XXXL	9 OZ JACKET	3X-LARGE	ORANGE
FR9J0XXXXL	9 OZ JACKET	4X-LARGE	ORANGE
FR9JOXXXXXL	9 OZ JACKET	5X-LARGE	ORANGE
FR9B14	9 OZ FLAME BIB (TIE-AROUND)	14 IN	GREEN
FR9B20	9 OZ FLAME BIB (TIE-AROUND)	20 IN	GREEN
FR9BA36	9 OZ BIB APRON	36 IN X 24 IN	GREEN
FR9BA42	9 OZ BIB APRON	42 IN X 24 IN	GREEN
FR9CSL	9 OZ CAPE SLEEVE JACKET	LARGE	GREEN
FR9CSM	9 OZ CAPE SLEEVE JACKET	MEDIUM	GREEN
FR9CSS	9 OZ CAPE SLEEVE JACKET	SMALL	GREEN
FR9CSXL	9 OZ CAPE SLEEVE JACKET	X-LARGE	GREEN
FR9CSXXL	9 OZ CAPE SLEEVE JACKET	2X-LARGE	GREEN
FR9CSXXXL	9 OZ CAPE SLEEVE JACKET	3X-LARGE	GREEN
FR9S18	9 OZ SLEEVE PROTECTORS	18 IN	GREEN
FR9S23	9 OZ SLEEVE PROTECTORS	23 IN	GREEN
FR9S023	9 OZ SLEEVE PROTECTORS	23 IN	ORANGE
AGHBP	ALUMINIZED BACK HAND SHIELD	7 1/2 IN X 5 1/2 IN	SLIVER & BLUE





Armour Guard™ Cow Split Leather Clothing

E 1	
FOOT	IIroc

Cow split leather Soapstone pockets	• Stitched with kevlar threads • Underarm gusset	 Brass snaps & rivets Cotton strap fitting mechanisi 	• RoHS compliant n
Item Number	Description	Size	Color
AGLJ30S	JACKET	SMALL	GOLDEN BROWN
AGLJ30M	JACKET	MEDIUM	GOLDEN BROWN
AGLJ30L	JACKET	LARGE	GOLDEN BROWN
AGLJ30XL	JACKET	X-LARGE	GOLDEN BROWN
AGLJ30XXL	JACKET	2X-LARGE	GOLDEN BROWN
AGLJ30XXXL	JACKET	3X-LARGE	GOLDEN BROWN
AGLJ30XXXXL	JACKET	4X-LARGE	GOLDEN BROWN
AGLCSS	CAPE SLEEVE	SMALL	GOLDEN BROWN
AGLCSM	CAPE SLEEVE	MEDIUM	GOLDEN BROWN
AGLCSL	CAPE SLEEVE	LARGE	GOLDEN BROWN
AGLCSXL	CAPE SLEEVE	X-LARGE	GOLDEN BROWN
AGLCSXXL	CAPE SLEEVE	2X-LARGE	GOLDEN BROWN
AGLCSXXXL	CAPE SLEEVE	3X-LARGE	GOLDEN BROWN
AGLB14	BIB	14 IN	GOLDEN BROWN
AGLB36	BIB APRON	36 IN	GOLDEN BROWN
AGHBP	HAND BACK PAD	7 1/2 IN X 5 1/2 IN	GOLDEN BROWN



AGLJ30



AGLCS

TECHNIWELDUS



AG24C



AG50



AG750



AG850

24

Armour Guard[™] Welding, Drivers & Work Gloves

AG24C TIG Welding Gloves

Features:

- Superior top grain pearl kidskin leather
- · Improved grip from the straight thumb 4" cuff for extra protection of the lower arm
- DuPont[™] Kevlar[®] stitching for enhanced strength and protection · Unlined to boost the feel and dexterity
- Ultra pliable

· · · · · · · · · · · · · · · · · · ·			
Item Number	Description	Size	Pkg Qty
AG24CS	TIG WELDING GLOVES	SMALL	12
AG24CM	TIG WELDING GLOVES	MEDIUM	12
AG24CL	TIG WELDING GLOVES	LARGE	12
AG24CXL	TIG WELDING GLOVES	X-LARGE	12
AG24CXXL	TIG WELDING GLOVES	XX-LARGE	12

AG50 MIG Welding Gloves

Features:

- · Engineered to ward off heat
- Superior top grain cowhide palm and back
- · Seamless forefinger that provides reliability
- 4" cuff for extra protection
- · Stays soft under hot conditions
- DuPont[™] Kevlar[®] stitching for enhanced strength and protection
- · Fleece lined for extra heat protection without added bulk
- · Extra protection added to palm, thumb, and backs of fingers for added resilience
- · Wrist elastic creates gripping a snug feel
- · Winged thumb for a great grip

Item Number	Description	Size	Pkg Qty
AG50S	MIG WELDING GLOVES	SMALL	12
AG50M	MIG WELDING GLOVES	MEDIUM	12
AG50L	MIG WELDING GLOVES	LARGE	12
AG50XL	MIG WELDING GLOVES	X-LARGE	12
AG50XXL	MIG WELDING GLOVES	XX-LARGE	12

AG750 STICK Welding Gloves

Features:

- · Superior pearl specially-tanned top grain leather stays flexible even when hot · Premium stiffened leather drag pad that extends glove life and protects the
- hand's side from high temperatures •14" length
- DuPont™ Kevlar® stitching for enhanced strength and protection
- · Additional strength and protection from reinforced thumb
- Epic performance in STICK applications
- · Continuous welted fingers to protect stitching
- · Cotton/foam lined back for extra heat protection and comfort
- Unlined palm that increases dexterity

Item Number	Description	Size	Pkg Qty
AG750S	STICK WELDING GLOVES	SMALL	12
AG750M	STICK WELDING GLOVES	MEDIUM	12
AG750L	STICK WELDING GLOVES	LARGE	12
AG750XL	STICK WELDING GLOVES	X-LARGE	12
AG750XXL	STICK WELDING GLOVES	XX-LARGE	12

AG850 STICK Welding Gloves

Features:

- · Superior gold top cow grain that remains soft even while hot · Premium reinforced leather drag pad that extends glove life and
- protects hand's side from high temperatures
- Epic performance in STICK applications
- •14" length

- DuPont™ Kevlar® stitching for enhanced strength and protection
- · Additional strength and protection from reinforced thumb
- · Continuous welted fingers to protect stitching
- · Cotton/foam lined back for extra heat protection and comfort
- · Unlined palm to increases dexterity

Item Number	Description	Size	Pkg Qty
AG850S	STICK WELDING GLOVES	SMALL	12
AG850M	STICK WELDING GLOVES	MEDIUM	12
AG850L	STICK WELDING GLOVES	LARGE	12
AG850XL	STICK WELDING GLOVES	X-LARGE	12
AG850XXL	STICK WELDING GLOVES	XX-LARGE	12

(Continued on next page)

1 (800) - 445 - 2152

AG1000 STICK/MIG Welding Gloves

Features:

- Single piece back
- True pearl leather color
- · Shoulder split cowhide
- 14" length

- DuPont™ Kevlar® stitching for enhanced strength and protection

- · Continuous welted fingers to protect stitching
- · Inside cotton lined to provide a comfortable work environment Affordable design

			5		
	Item Number	Description		Size	Pkg Qty
	AG1000L	STICK/MIG WELDING GLOVES		LARGE	12
	AG1000XL	STICK/MIG WELDING GLOVES		X-LARGE	12

AG1200 STICK Welding Gloves

Features:

- Single piece back
- Superior split cowhide stays flexible, even while hot
- •14" length
- DuPont[™] Kevlar[®] stitching for enhanced strength and protection Reinforced thumb
- · Continuous welted fingers to protect stitching
- Cool blue color
- · Full cotton lined back for extra heat protection and comfort · Unlined palm for additional dexterity

Item Number	Description	Size	Pkg Qty
AG1200L	STICK WELDING GLOVES	LARGE	12
AG1200XL	STICK WELDING GLOVES	X-LARGE	12

AG1414 DRIVERS Gloves

Features:

- · Contoured to fit the natural shape of your hand
- DuPont[™] Kevlar[®] stitching for enhanced strength and protection
- Scotch colored cowhide split leather back

 Keystone style thumb design · Super duty palm made of top grain pearl cowhide · Unlined to enhance feel and dexterity

Item Number	Description	Size	Pkg Qty
AG1414M	DRIVERS GLOVES	MEDIUM	12
AG1414L	DRIVERS GLOVES	LARGE	12
AG1414XL	DRIVERS GLOVES	X-LARGE	12
AG1414XXL	DRIVERS GLOVES	XX-LARGE	12

AG1515B WORK Gloves

Features:

Features:

- Ideal high-end work glove
- Gunn cut with 2" rubberized safety cuff
- · Shoulder split cowhide, double palm, and knuckle strap
- · Double palmed for additional palm protection to key areas Canvas back
- DuPont™ Kevlar® stitching for enhanced strength and protection

Item Number	Description	Size	Pkg Qty
AG1515BL	WORK GLOVES	LARGE	12
AG1515BXL	WORK GLOVES	X-LARGE	12

AG1525 WORK Gloves

 Professional, affordable work glove Canvas backing 		 Rugged, side-split cowhide palm and knuckle strap Gunn cut with 2" rubberized safety cuff 		
Item Number	Description		Size	Pkg Qty
AG1525S	WORK GLOVES		SMALL	12
AG1525M	WORK GLOVES		MEDIUM	12
AG1525L	WORK GLOVES		LARGE	12
AG1525XL	WORK GLOVES		X-LARGE	12
AG1525XXL	WORK GLOVES		XX-LARGE	12

ARMOUR GU*RD





AG1200















TECHNIWELDUSA



AGMATMODCYS



AGMATMODM



AGMAT36X60HDYS



AGMATPORT12X22



TW146050BLK

26

Armour Guard[™] Anti-Fatigue Mats

Features:

- Closed-cell nitrile blended cushion is permanently molded (not glued) to the nitrile rubber top surface
- · Welding safe and electrically conductive

 Recommended for distribution, manufacturing and retail facilities for picking lines, assembly lines, work stations, check-out stations, and more

 Chemical-resistant, grease and oil-resistant; borders will not crack or curl

Item Number	Description	Size
AGMAT36X60	RUBBER FATIGUE MAT	3 FT X 5 FT X 5/8 IN
AGMAT36X60HD	HEAVY DUTY RUBBER FATIGUE MAT	3 FT X 5 FT X 7/8 IN
AGMAT36X60HDYS	HEAVY DUTY RUBBER FATIGUE MAT WITH YELLOW STRIPE	3 FT X 5 FT X 5/8 IN
AGMAT36X60YS	RUBBER FATIGUE MAT WITH YELLOW STRIPE	3 FT X 5 FT X 5/8 IN
AGMAT48X72	RUBBER FATIGUE MAT	4 FT X 6 FT X 5/8 IN
AGMAT48X72HD	HEAVY DUTY RUBBER FATIGUE MAT	4 FT X 6 FT X 7/8 IN
AGMAT48X72HDYS	HEAVY DUTY RUBBER FATIGUE MAT WITH YELLOW STRIPE	4 FT X 6 FT X 7/8 IN
AGMAT48X72YS	FR RUBBER FATIGUE MAT WITH YELLOW STRIPE	4 FT X 6 FT X 5/8 IN
AGMATMODC	MODULAR MAT CORNER TILE	18 IN X 21 7/8 IN X 3/4 IN
AGMATMODCYS	MODULAR MAT CORNER TILE WITH YELLOW EDGE & STRIPE	18 IN X 21 7/8 IN X 3/4 IN
AGMATMODM	MODULAR MAT MIDDLE TILE WITH YELLOW EDGE	18 IN X 21 7/8 IN X 3/4 IN
AGMATMODS	MODULAR MAT SIDE TILE	18 IN X 21 7/8 IN X 3/4 IN
AGMATMODSYS	MODULAR MAT SIDE TILE WITH YELLOW EDGE & STRIPE	18 IN X 21 7/8 IN X 3/4 IN
AGMATPORT12X22	PORTABLE COMFORT MAT	12 IN X 22 IN X 7/8 IN
AGMATPORT18X30	PORTABLE COMFORT MAT	18 IN X 30 IN X 7/8 IN

Armour Guard[™] Rolled Goods

Techniweld carries a full range of Armour Guard[™] rolled goods in every size and weight. Armour Guard[™] is the ultimate combination of performance, durability, and value. These fabrics offer high-temperature and heat resistance, along with the ability to shed welding splatter and molten steel & aluminum splash. Typical applications are as rolled goods, or high-temperature rolled goods for engine exhaust components or industrial equipment, steam and gas turbines. Armour Guard[™] rolled goods protect workers and equipment from the hazards of UV flash, spatter, and sparks

Item Number	Description	Color	Size
TW146050BLK	14 OZ FIBERGLASS ROLL	BLACK	60 IN X 50 YD
156050SILINS	15 OZ SILICON COATED FIBERGLASS ROLL	GREY	60 IN X 50 YD
164025P	16 OZ NEOPRENE COATED HALF ROLL	SALMON	40 IN X 25 YD
166025P	16 OZ NEOPRENE COATED FIBERGLASS HALF ROLL	SALMON	60 IN X 25 YD
167225P	16 OZ NEOPRENE COATED FIBERGLASS HALF ROLL	SALMON	72 IN X 25 YD
TW164050AR	16 OZ ACRYLIC COATED FIBERGLASS ROLL	SALMON	40 IN X 50 YD
TW164050ARR	16 OZ ACRYLIC COATED FIBERGLASS ROLL	RED	40 IN X 50 YD
TW166050AR	16 OZ ACRYLIC COATED FIBERGLASS ROLL	SALMON	60 IN X 50 YD

(Continued on next page)

ARMOUR GU*RD

TW166050ARR	16 OZ ACRYLIC COATED FIBERGLASS ROLL	RED	60 IN X 50 YD	
175060SIL	17 OZ SILICON COATED FIBERGLASS ROLL	RED	60 IN X 50 YD	
176050SILINS	17 OZ SILICON COATED FIBERGLASS ROLL	GREY	60 IN X 50 YD	
183650SIL	18 OZ HIGH SILICA FIBERGLASS ROLL	TAN	36 IN X 50 YD	
TW182540	18 OZ FIBERGLASS HALF ROLL	TAN	40 IN X 25 YD	
TW182560	18 OZ FIBERGLASS HALF ROLL	TAN	60 IN X 25 YD	
TW182572	18 OZ FIBERGLASS HALF ROLL	TAN	75 IN X 25 YD	TW164050ARR
TW1837272	18 OZ FIBERGLASS ROLL	TAN	72 IN X 50 YD	
TW185040	18 OZ FIBERGLASS ROLL	TAN	40 IN X 50 YD	
TW185060	18 OZ FIBERGLASS ROLL	TAN	60 IN X 50 YD	
2440500RG	24 OZ FIBERGLASS ROLL	ORANGE	40 IN X 50 YD	
2440500RGFM	24 OZ FM STAMPED FIBERGLASS ROLL	TAN	40 IN X 50 YD	
244050YEL	24 OZ NEOPRENE COATED FIBERGLASS ROLL	YELLOW	40 IN X 50 YD	
2460500RG	24 OZ FIBERGLASS ROLL	ORANGE	60 IN X 50 YD	
TW246050	24 OZ FIBERGLASS ROLL	TAN	60 IN X 50 YD	183650SIL
326050RED	32 OZ SILICON COATED FIBERGLASS ROLL	RED	60 IN X 50 YD	
3540500RG	35 OZ FIBERGLASS ROLL	ORANGE	40 IN X 50 YD	

Armour Guard[™] Protective Blankets

Techniweld carries a full range of Armour Guard[™] fiberglass welding blankets in every size and weight. Armour Guard[™] is the ultimate combination of performance, durability, and value. These fabrics offer high-temperature and heat resistance, along with the ability to shed welding splatter and molten steel & aluminum splash. Typical applications are as welding curtains or blankets, or high-temperature protection blankets for engine exhaust components or industrial equipment, steam and gas turbines.

Armour Guard[™] welding blankets are grommeted along edges

Features:

· Fire-resistant fiberglass

- Armour Guard™ Welding Blankets protect workers and equipment from the hazards of UV flash, spatter, and sparks
- Item Number Description Color Size BW6X6P 6 OZ NEOPRENE COATED FIBERGLASS WELDING BLANKET 6 FT X 6 FT SALMON BW6X8P 6 FT X 8 FT 16 OZ NEOPBENE COATED EIBERGLASS WELDING BLANKET SALMON BW10X10P 16 OZ FIBERGLASS WELDING BLANKETS SALMON 10 FT X 10 FT BW6X6 **18 OZ FIBERGLASS WELDING BLANKET** TAN 6 FT X 6 FT BW6X8 **18 OZ FIBERGLASS WELDING BLANKET** TAN 6 FT X 8 FT BW8X10 18 07 FIBERGI ASS WEI DING BI ANKET 8 FT X 10 FT TAN BW8X8 **18 OZ FIBERGLASS WELDING BLANKET** TAN 8 FT X 8 FT BW10X10 18 OZ FIBERGLASS WELDING BLANKETS 10 FT X 10 FT TAN BW10X12 10 FT X 12 FT **18 OZ FIBERGLASS WELDING BLANKETS** TAN BW12X12 18 OZ/YD FIBERGLASS WELDING BLANKET TAN 12 FT X 12 FT BW6X60RG 24 OZ FIBERGLASS WELDING BLANKET ORANGE 6 FT X 6 FT BW6X80RG 24 OZ FIBERGLASS WELDING BLANKET 6 FT X 8 FT ORANGE BW10X100RG 24 OZ FIBERGLASS WELDING BLANKETS ORANGE 10 FT X 10 FT



BW10X10



BW10X100RG

'/'=LD



TWWC6X6GRN



TWWC6X60RG



AGC4X8CLR



SNEEZESHIELD

28

Armour Guard™ Welding Curtains

Armour Guard[™] by Techniweld USA offers high quality vinyl welding curtains. Paired with our Armour Guard[™] frame, these curtains provide reliable protection at any job site offering safety, spark containment, durability, portability, temperature, and noise control. Flame retardant transparent vinyl provides optical protection when visibility is required. Formulated to disperse arc image and allow light back into work area. Armour Guard™ frames are easy to assemble and are made to be modular & extendable to make long curtains walls; each metal frame is fitted with a special attachment on the sides, as standard, which enables another metal frame to be connected/extended using a special small part called the frame extender.

Welding Curtain Features:

- Armour Guard[™] Welding Curtains protect workers and equipment from the hazards of UV flash, spatter, and sparks
- Armour Guard[™] welding curtains are grommeted along edges
- Armour Guard[™] made Welding Curtains are made from 14 mil (0.35mm) PCV film, and treated with special additives for UV stability and fire-resistance
- · Easy connection allows assembly

Welding Frame Features:

- · Each section slides in for locking · Pipe joints have screwless push fit snap locks
- · No tools required for assembly - Made of 1" (25mm) round tube

without tools

Item Number	Description	Size
TWWC6X6GRN	GREEN WELDING CURTAIN	6 FT X 6 FT
TWWC6X6GRNWF	GREEN WELDING CURTAIN WITH FRAME	6 FT X 6 FT
TWWC6X60RG	ORANGE WELDING CURTAIN	6 FT X 6 FT
TWWC6X60RGWF	ORANGE WELDING CURTAIN WITH FRAME	6 FT X 6 FT
TWWC6X8GRN	GREEN WELDING CURTAIN	6 FT X 8 FT
TWWC6X80RG	ORANGE WELDING CURTAIN	6 FT X 8 FT
TWWC6X80RGWF	ORANGE WELDING CURTAIN WITH FRAME	6 FT X 8 FT
TWWCF6X6	WELDING CURTAIN FRAME	6 FT X 6 FT
TWWCF6X8	WELDING CURTAIN FRAME	6 FT X 8 FT
TWWCF6XEX	18 GAUGE EXPANDABLE WELDING CURTAIN FRAME	6 FT X 6 OR 8 FT

Armour Guard[™] Clear Safety Curtains & Divider

Clear Safety Curtains Features:

- · Barrier protection from airborne contamination from each other
- Grommeted along all edges
- Individually packaged, 10/box (Curtain Only. Frame sold separately)
- Lightweight & modular
- · Clean easily with most spray cleaners or water
- · No tools required for assembly

Item Number	Description
AGC4X6CLR	4 X 6 IN TRANSPARENT PVC SAFETY CURTAIN (PAIRS WELL WITH TWWCF6X6 FRAME)
AGC4X8CLR	4 X 8 TRANSPARENT PVC SAFETY CURTAIN (PAIRS WELL WITH TWWCF6X8 FRAME)
Divider Features:	

- Serves as a barrier for close contact transactions · Made of long-lasting durable acrylic

- Self Standing and portable 5mm Thickness

Description

item Number	beschpton
SNEEZESHIELD	36 X 24 IN SELF STANDING CLEAR ACRYLIC SHIELD WITH 12 X 20 IN PASS THROUGH

Armour Guard™ Tarps

Features:

 Made from durable plastic that is water, mildew, fade, and tear resistant
 All-weather protection and construction cover Rustproof aluminum grommets located every 3 feet along all edges

Reinforced at the hems with heat sealed seams

Item Number	Description	Size	Thickness	Weave
AGTARP6X85MIL	BLUE HEAVY DUTY UTILITY TARP	6 FT X 8 FT	5 MIL	8 X 8
AGTARP8X105MIL	BLUE HEAVY DUTY UTILITY TARP	8 FT X 10 FT	5 MIL	8 X 8

(Continued on next page)

T	8	M	- 445 - 2152

AGTARP10X105MIL BLUE HEAVY DUTY UTILITY TARP 10 FT X 10 FT 5 MIL 8 X 8 AGTARP10X125MIL BLUE HEAVY DUTY UTILITY TARP 10 FT X 12 FT 5 MIL 8 X 8 AGTARP12X125MIL BLUE HEAVY DUTY UTILITY TARP 12 FT X 12 FT 5 MIL 8 X 8 AGTARP12X165MIL BLUE HEAVY DUTY UTILITY TARP 12 FT X 16 FT 5MIL 8 X 8 AGTARP20X205MIL BLUE HEAVY DUTY UTILITY TARP 20 FT X 20 FT 5 MIL 8 X 8

Armour Guard[™] Cable Ties

Features:

- UV Stabilized & general purpose cable ties
- Hang tag plastic packaging
- Engineered for durability and industrial use

Nylon 66

Meets or exceeds UL Requirements

Item Number	Description	Tensile Strength	Size	Color	Pkg Qty
AGCT41B	UV STABILIZED	18 LB	4 3/16 IN	BLACK	100/BAG
AGCT41N	GENERAL PURPOSE	18 LB	4 3/16 IN	NATURAL	100/BAG
AGCT76B	UV STABILIZED	50 LB	7 3/5 IN	BLACK	100/BAG
AGCT76N	GENERAL PURPOSE	50 LB	7 3/5 IN	NATURAL	100/BAG
AGCT9B	UV STABILIZED	120 LB	9 IN	BLACK	100/BAG
AGCT9N	GENERAL PURPOSE	120 LB	9 IN	BLACK	100/BAG
AGCT111B	UV STABILIZED	50 LB	11 3/16 IN	BLACK	100/BAG
AGCT111N	GENERAL PURPOSE	50 LB	11 3/16 IN	NATURAL	100/BAG
AGCT15B	UV STABILIZED	50 LB	15 IN	BLACK	100/BAG
AGCT15N	GENERAL PURPOSE	50 LB	15 IN	NATURAL	100/BAG
AGCT146B	UV STABILIZED	50 LB	14 3/5 IN	BLACK	100/BAG
AGCT146N	UV STABILIZED	50 LB	14 3/5 IN	NATURAL	100/BAG
AGCT245B	UV STABILIZED	175 LB	24 1/2 IN	BLACK	50/BAG
AGCT245N	GENERAL PURPOSE	175 LB	24 1/2 IN	NATURAL	50/BAG
AGCT36B	UV STABILIZED	175 LB	36 IN	BLACK	50/BAG
AGCT36N	GENERAL PURPOSE	175 LB	36 IN	NATURAL	50/BAG
AGCT48B	UV STABILIZED	175 LB	36 IN	BLACK	50/BAG

Armour Guard[™] Respirators

Features:

 Premium cone mask with adjustable aluminum nose clip for excellent fit and ultrasonically welded latex free headstrap

Exceptional inside filter for low breathing resistance

- Filter valve lets hot air out more easily, which makes breathing more comfortable and reduces fogging of glasses or goggles
- Cone shape can contour to the face for added comfort
 Individually adjustable aluminum nose clip for excellent fit
- Flanged edge for secure facial seal
- Fully adjustable strap for an even more secure seal

Item Number	Description	Color	Pkg Qty
AGNDM	NUISANCE DUST MASK	WHITE	50/BOX
AGN95C	N95 CONE RESPIRATOR	WHITE	20/BOX
AGN95CV	N95 CONE RESPIRATOR WITH EXHALATION VALVE	WHITE	10/B0X
AGN95F	FOLDABLE N95 CONE RESPIRATOR	WHITE	20/BOX
AGN95FV	FOLDABLE N95 CONE RESPIRATOR WITH EXHALATION VALVE	WHITE	10/B0X
AGN95WV	FLANGED EDGE WELDING N95 CONE RESPIRATOR WITH EXHALATION VALVE	WHITE	10/B0X
AGN95WVA	FLANGED EDGE WELDING N95 CONE RESPIRATOR WITH EXHALATION VALVE AND ADJUSTABLE STRAP	WHITE	10/B0X

•

AGTARP10X105MIL



AGNDM



AGN95CV







29

WWW.TECHNIWELDUSA.COM



FOR ALL YOUR OXY-FUEL WELDING, CUTTING, AND GAS FLOW CONTROL

Quality Standards

Techniweld USA's, *Blue Star*[™], provides an aid to welders from all different types of welding environments in all Oxy-fuel gas cutting and controlling needs. The oxy-fuel gas cutting process cuts metal by using the chemical combination of oxygen with metal at high temperatures. The necessary amount of temperature is created by combining a fuelled gas and oxygen. The cutting action is produced through a pure oxygen stream.

The benefits of using Oxy-fuel Cutting Process:

- When compared to mechanical means, steel can generally be cut faster.
- The oxy-fuel equipment is easy to carry, lowers cost, safe to use, and can be used for a variety of purposes.
- Both thin and thick plates can be cut fast with manual systems.
- Preparing the plate edge for bevel operations oxy-fuel is an economical method.
- Able to cut through rusty and crooked plates easily
- You don't have to be an expert in order to produce acceptable results.

However, oxy-fuel has limitations:

- When compared to other cutting processes, the cutting dimensional limits are not as precise.
- Only cutting carbon and cast steels
- You must be careful when oxy-fuel cutting in order to minimize hazardous results.
- In order to cut special alloys, you may need to take the additional step of heating the metal before and/or both to complete the cutting process.



- Safety Guidelines **31**
- Outfits & Handles 32-35
 - Torches 35-36
- Welding & Heating Tips 37
 - Cutting Tips 38-39
 - Strikers & Flints 40
 - Weed Burners **41**
- Regulators & Flow Meters 42-46
 - Pressure Gauges 47
 - Balloon Fillers **48**
 - Hoses & Repair Kits 49-50
 - Brass fittings 51-55
 - Cylinder Carts 56
 - Gas Cylinder Hook 57
 - Tote **57**
 - Track Torch & Track 58



Safety Guidelines

Your safety is the most important! When going through the oxy-fuel cutting process make sure to:

- Always wear the proper safety apparel, which includes but not limited to goggles, gloves, and clothing.
- Always check the proper regulator for the amount of gas in the cylinder.
- Always check the cylinder valves and close or replace caps when finished using cylinders.
- Always have a fire extinguisher handy, as well as performing a Safety risk assessment before welding.
- Never use cylinders that have been stored in temperatures over 125°F (52°C).
- Make sure cylinders are stored in the upright position.
- Please remove all lighters, matches, or flammable products from pockets or near the welding and cutting area.
- Check to make sure welding hoses do not touch the flame or sparks when cutting.
- Always be aware of your surroundings when using a cutting torch.

Range of Hand Cutting Operating							Cu	tting Range	
Plate	Cutting Speed	Oxygen	Oxygen	Oxygen	Fuel	Fuel	Cut Kerf		Light Duty
Thickness	(inches per	Preheat	Cut Flow	Pressure	Flow	Pressure	(inches)		Heavy Duty
(inches)	minute)	(psig)	(ctn)	(psig)	(ctn)	(psig)			Straight
1/8	20-30	5-6	20-25	20-25	6-11	3-5	0.04		Cutting Torch
1/4	20-28	5-7	30-35	20-25	6-11	3-5	0.05		
3/8	18-26	8-10	55-60	25-30	6-11	3-5	0.06		
1/2	16-22	8-10	60-65	30-35	8-13	3-7	0.06		
3/4	15-20	10-12	80-85	30-35	9-16	3-7	0.07		
1	13-18	12-15	140-160	35-40	10-18	3-7	0.09		
2	10-12	14-18	210-240	40-45	14-25	4-8	0.11		
3	10-12	16-20	280-320	40-45	18-28	5-11	0.12		
4	6-9	20-30	390-450	45-55	20-30	6-13	0.15		
6+	4-6	25-35	500-600	30-40	22-30	8-14	0.15		Ŏ

Range of Machine Cutting Operating								
Tip Size	Plate Thickness (inches)	Cutting Speed (inches per minute)	Oxygen Preheat (psig)	Oxygen Cut Flow (cfh)	Oxygen Pressure (psig)	Fuel Flow (cfh)	Fuel Pressure (psig)	Cut Kerf (inches)
00	3/8	22-29	25-45	68-75	85-95	6-11	5-10	0.05
0	1/2	20-28	45-65	110-120	85-95	8-13	5-10	0.06
0	3/4	18-26	45-75	110-120	85-95	9-16	5-10	0.06
1	1	1-24	75-100	145-160	85-95	10-18	5-10	0.07
2	2	11-15	90-110	230-250	85-95	14-25	7-12	0.09
2	3	9-11	90-110	230-250	85-95	18-28	7-12	0.09
3	4	7-10	100-120	285-320	85-95	22-35	7-12	0.11
3	6+	4-7	100-120	285-320	85-95	25-65	10-15	0.11
4	8+	4-6	110-130	390-450	85-95	25-65	10-15	0.14
5	10+	3-5	120-140	670-720	85-95	25-65	10-15	0.18



Torch Outfits



250 Series Light Duty Torch Outfits

The Blue Star[™] 250 series outfits provide light duty welding and cutting performance in home and trade environments.

Item Number	Item Number
BS250TO	BS250TO300
Cut up to 5"	- Cut up to 5"
 Weld up to 1.25" with proper tips 	 Weld up to 1.25" with proper tips
WH250 Handle	WH250 Handle
CA250 cutting attachment	CA250 cutting attachment
250 series Oxygen and CGA 510 Acetylene regulator	 250 series Oxygen and CGA 300 Acetylene regulator
0-3-101 cutting tip	0-3-101 cutting tip
 Victor Style #0 Welding Nozzle (0-W-1) 	 Victor Style #0 Welding Nozzle (0-W-1)
 12' x 1/4" R-Grade twin hose 	 12' x 1/4" R-Grade twin hose

- Flint Striker
- **Goggles and Tip Cleaner Set**

- 12' x 1/4" R-Grade twin hose
- Flint Striker
- **Goggles and Tip Cleaner Set**

All regulators, welding handles, and cutting attachments are (1) LISTED



Torch Outfits



350 Series Heavy Duty Torch Outfits

The Blue Star[™] 350 series outfits provide heavy duty welding and cutting performance in industrial, construction, farm, and M&R environments.

Item Number	Item Number
BS350TO	BS350TO300
 Cut up to 8" Weld up to 3" with proper tips WH350 Handle 	 Cut up to 8" Weld up to 3" with proper tips WH350 Handle
CASEO suffing affecting and	CASEO sutting attack ment

- CA350 cutting attachment
- 350 series Oxygen and CGA 510 Acetylene regulator
- 1-1-101 cutting tip
- Victor Style #2 Welding Nozzle (2-W)
- 12' x 1/4" R-Grade twin hose
- Flint Striker
- Goggles and Tip Cleaner Set

- CA350 cutting attachment
- 350 series Oxygen and CGA 300 Acetylene regulator
- 1-1-101 cutting tip
- Victor Style #2 Welding Nozzle (2-W)
- 12' x 1/4" R-Grade twin hose
- Flint Striker
- Goggles and Tip Cleaner Set

All regulators, welding handles, and cutting attachments are (U) LISTED



Torch Outfits



450 Series Heavy Duty Torch Outfits

The Blue Star[™] 450 series outfits provide heavy duty welding and cutting performance in industrial, construction, and oilfield environments.

	Item Number	Item Number
	BS450TO	BS450TOOXY
1.	Cut up to 8"	Cut up to 8"
1.1	Weld up to 3" with proper tips	Weld up to 3" with proper tips
÷.,	WH350 Handle	WH350 Handle
	CA350 cutting attachment	CA350 cutting attachment
1.1	450 series Oxygen and CGA 540 Acetylene regulator	Two 450 series Oxygen regulator
1.1	1-1-101 cutting tip	1-1-101 cutting tip
1.1	Victor Style #2 Welding Nozzle (2-W)	Victor Style #2 Welding Nozzle (2-W)
	12' x 1/4" R-Grade twin hose	• 12' x 1/4" R-Grade twin hose
1.1	Flint Striker	Flint Striker
1.1	Googles and Tip Cleaner Set	Googles and Tip Cleaner Set

All regulators, welding handles, and cutting attachments are (4) LISTED



Travel Tote Torch Outfits & Kit

Plane addutive laws	Item Number
	BSPTK (Travel Tote and Torch Outfit)
	BS1020 (Travel Tote Only)
	BSTOTETO (Terch Quffit Only)

The Blue Star[™] Travel Tote Kit provides an economical lightweight, highly portable travel tote equipped with a Torch Outfit for welding, brazing, and cutting in light duty maintenance, HVAC, and DIY applications.

- Cut up to 5"
- CA250 cutting attachment
- Victor Style #2 Welding Nozzle (2-W-1)
- The included portable travel tote is lightweight, economical, and holds one "MC tank as well as one "R" tank (tanks not included)
- Weld up to 1.25" with proper tips
 - 150 series back mount Oxygen and
- WH250 Handle
- 1-3-101 cutting tip
- Goggles and Tip Cleaner Set
- Acetylene regulators. 12' x 1/4" R-Grade twin hose
- Flint Striker

Cutting Torches

Victor Style Heavy-Duty Hand Cutting Torch

- 9/16" 18 connections
- 90 head
- Built-In check valves
- Cuts from 1/8" to 10"
- Uses Series 1 Victor Style cutting tips
- 21," 36," and 48," overall length models
- Universal mixers work with all equal pressure fuel gasses 3 PSI and higher.

Item Number	Length	Description
BS1400V	21″	Medium - Heavy Duty
BS1400V36	36″	Medium - Heavy Duty
BS1400V48	48"	Medium - Heavy Duty



(TECHNIWELDUSA)

Cutting Torches

Victor Style Cutting Attachment & Torch Handle

- Flame tested in USA for superior performance
- American quality control
- Contain copper threading and are made from complete solid bar stock
 where applicable
- Solid, not hollow, heavy duty gas apparatus accessories to increase life, heat dissipation, and overall performance
- UL Listed
- Parts are Victor compatible



Item Number	Description
BSCA250I (Cutting Attachment)	Light - Medium Duty
BSWH250I (Torch Handle)	Light - Medium Duty
BSCA350I (Cutting Attachment)	Medium - Heavy Duty
BSWH350I (Torch Handle)	Medium - Heavy Duty

Harris Style Heavy-Duty Hand Cutting Torch

- 9/16" 18 "B" connections
- Available with 90° or 75° heads
- Use Harris Style 6290 cutting tips
- Cuts up to 12" with proper tips
- Available in "E" Series with equal pressure mixer for use with fuel gasses at 3 PSI and above, or "F" Series* injectors for use with fuel gasses and N.G. at 4 oz. pressure and up.
- Includes reverse flow check valves



Item Number	Length	Head Angle	Description	Fuel/Gasses
BS623E2190	21″	90°	Heavy Duty	Acetylene & other at 3PSI and higher
BS623F2190	21″	90°	Heavy Duty	Natural Gas & alternate at 4 oz. and higher*
BS623E3690	36″	90°	Heavy Duty	Acetylene & other at 3PSI and higher
BS623E3675	36″	75°	Heavy Duty	Acetylene & other at 3PSI and higher
BS623F3690	36″	90°	Heavy Duty	Natural Gas & alternate at 4 oz. and higher*
BS623F3675	36″	75°	Heavy Duty	Natural Gas & alternate at 4 oz. and higher*
BS623E4890	48″	90°	Heavy Duty	Acetylene & other at 3PSI and higher
BS623E4875	48″	75°	Heavy Duty	Acetylene & other at 3PSI and higher
BS623F4890	48″	90°	Heavy Duty	Natural Gas & alternate at 4 oz. and higher*
BS623F4875	48″	75°	Heavy Duty	Natural Gas & alternate at 4 oz. and higher*

*NOT FOR USE WITH ACETYLENE


Welding and Heating Tips

Item	End	Item Number	Style	Torch Style	Tip	Sizes
	•	W00W1, W0W1, W1W1, W2W1, W3W1, W4W1, W5W1, W6W1	Victor	100	Welding	00, 0, 1, 2, 3, 4, 5, 6
	•	W00W, W0W, W1W, W2W, W3W, W4W, W5W, W6W, W7W, W8W	Victor	300	Welding	00, 0, 1, 2, 3, 4, 5, 6, 7, 8
		H4MFA, H6MFA, H8MFA, H10MFA, H12MFA, H15MFA	Victor	300	Heating	4, 6, 8, 10, 12, 15
		H2MFA1, H4MFA1, H6MFA1, H8MFA1	Victor	100	Heating	2, 4, 6, 8
		H2MFAJ, H4MFAJ, H6MFAJ	Victor	J	Heating	2, 4, 6





FOR ALL OXY-FUEL WELDING, CUTTING, AND GAS FLOW CONTROL

Cutting Tips

Itom	End	Itom Numbor	Style	Cutting	Prohoat	Sizos
	LIIU		Style	Cutting	Freneat	51265
		BS14400, BS1440, BS1441, BS1442, BS1443, BS1444, BS1445, BS1446	Airco	General	Medium	00, 0, 1, 2, 3, 4, 5, 6
		BS16400, BS1640, BS1641, BS1642, BS1643, BS1644, BS1645, BS1646, BS1647	Airco	General	Medium	00, 0, 1, 2, 3, 4, 5, 6, 7
		BS629000, BS62900, BS62901, BS62902, BS62903, BS62904, BS62905, BS62906	Harris	Hand	Medium	00, 0, 1, 2, 3, 4, 5, 6
		BS6290NX000, BS6290NX00, BS6290NX0, BS6290NX1, BS6290NX2, BS6290NX3, BS6290NX4, BS6290NX5, BS6290NX6	Harris	General	Medium	000, 00, 0, 1, 2, 3, 4, 5, 6
		BS6290GG2, BS6290GG3, BS6290GG4	Harris	Gouging	Medium	2, 3, 4
		BS15022, BS15023, BS15024, BS15026	Ox- weld	Hand	Medium	2, 3, 4, 6
		BS4202-1, BS42022, BS42023, BS42024, BS42025, BS42027, BS42029	Purox	Hand	Medium	2, 3, 4, 5, 7, 9



Cutting Tips Style Cutting Preheat Sizes Item End **Item Number** BSMC1200, BSMC120, BSMC121, BSMC122, 00, 0, 1, 2, Smith General Medium BSMC123, BSMC124, 3, 4, 5 BSMC125 BSSC12000, BSSC1200, 000, 00, 0, BSSC120, BSSC121, BSSC122, Smith Hand Medium 1, 2, 3, 4, BSSC123, BSSC124, BSSC125, 5, 6 BSSC126 BSSC5000, BSSC500, BSSC501, BSSC502, 00, 0, 1, 2, Smith Hand Heavy BSSC503, BSSC504, 3, 4, 5, 6 BSSC505, BSSC506 BS1101000, BS110100, BS11010, 000, 00, 0, BS11011, BS11012, BS11013, Medium Victor 1, 2, 3, 4, 5, Hand BS11014, BS11015, BS11016, 6, 7, 8 BS11017, BS11018 BS3101000, BS310100, 000, 00, 0, BS31010, BS31011, BS31012, Victor Hand Medium 1, 2, 3, 4, 5 BS31013, BS31014, BS31015 BS11180, BS11182, BS11184, Victor Medium 0, 2, 4, 6, 8 Gouging BS11186, BS11188 BSGPN000, BSGPN00, 000, 00, 0, • BSGPN0, BSGPN1, BSGPN2, 1, 2, 3, 4, 5, Victor Hand Heavy BSGPN3, BSGPN4, BSGPN5, 6, 7, 8 **BSGPN6, BSGPN7, BSGPN8** BS3GPN000, BS3GPN00, BS3GPN0, BS3GPN1, 000, 00, 0, Victor Hand Medium BS3GPN2, BS3GPN3, 1, 2, 3, 4, 5 BS3GPN4, BS3GPN5

Strikers and Flints

Blue Star™ offers a variety of strikers and flints for your oxy-fuel welding needs.



Spark Lighter

Premium range spark lighter by Blue Star™ Upgrade from your traditional flint lighter to our more efficient money-saving option

- · Electric multi-spark discharge will accurately ignite all fuel gases quickly and easily
- Made of high quality materials; zinc plated body resists rust and corrosion
- Energy generator used never needs flint, batteries, or a charge
- Minimum of five sparks per squeeze
- Can withstand severe working conditions
- Ignites Oxy/LPG and Oxy/Acetylene only
- Extended Life

Item Numbe	er
SLPIEZO	



Tip Cleaner

Stainless steel wire files for cleaning the gas orifices of cutting and welding tips. File sizes from 49 to 77. Tip file comes in an aluminum case.
Cleaner Size 6-26
Drill Size 49-77

Item Number Description
TCSTDI Standard Tip Cleaner



Weed Burners

Blue Star[™] Fireboss weed burner kit

- 500,000 BTU Output which connects to standard 20-Pound barbecue grill type liquid propane tank
- Features a brass control knob that will not lock or freeze during use, an all steel torch handle and torch head construction
- 10-Feet (304 m) hose with POL safety valve and universal CGA-510 LP connection
- Striker included for proper ignition and 36-Inch all steel handle and torch head
- · Practical uses include burning weeds, melting ice, repairing asphalt
- UL Listed
- Parts are Victor Compatible



Item Number FIREBOSS

Blue Star[™] 10' Replacement Hose For Fireboss Weed Burner

- 10-Feet (304 m) hose with POL safety valve and universal CGA-510 LP connection
- UL Listed
- Parts are Victor Compatible



Item Number

150 Series Pressure Regulators

The Blue Star[™] 150 series pressure regulators provide a back mount, and are designed for use with travel tote portable style torch outfits. Light-duty performance for maintenance, HVAC, and DIY applications.

- Single-stage design
- Home and trade use
- Forged brass body and housing cap
- 1.5" gauges
- Stem type seat mechanism
- Sintered inlet filter
- Built-in relief valve (oxygen,inert)
- Maximum inlet: 3000psig
- Fabric reinforced neoprene diaphragm
- Dimensions: 4.5"W x 4.5"H x 4.75"D



Item Number	Description	Outlet Pressure (psig)	Inlet Fitting	Gas Service (CGA)	Tank Size
BS150I200	150 Series Acetylene 200 Pressure Regulator	2-15	200	Acetylene	MC
BS150I520	150 Series Acetylene 520 Pressure Regulator	2-15	520	Acetylene	В
BS150I540	150 Series Oxygen 540 Pressure Regulator	5-80	540	Oxygen	R

250 Series Pressure Regulators



The Blue Star[™] 250 series pressure regulators provide a Light-duty performance.

- Single-stage design
- Home and trade use
- Forged brass body and housing cap
- 2" gauges
- Stem type seat mechanism
- Sintered inlet filter
- Built-in relief valve (oxygen,inert)
- Maximum inlet: 3000psig
- Fabric reinforced neoprene diaphragm
- Dimensions: 6.5"W x 5.25"H x 4.5"D

Item Number	Description	Outlet Pressure (psig)	Inlet Fitting	Gas Service (CGA)
BS250I300	250 Series Acetylene 300 Pressure Regulator	2-15	300	Acetylene
BS250I510	250 Series Acetylene 510 Pressure Regulator	2-15	510	Acetylene
BS250I540	250 Series Oxygen 540 Pressure Regulator	5-125	540	Oxygen



350 Series Pressure Regulators



The Blue Star [™] 350 series pressure regulators provide heavy-duty welding and cutting performance in industrial, construction, farm, and M&R environments.

- Single-stage design
- Forged brass body and housing cap
- 2.5" gauges
- Stem type seat mechanism
- Sintered inlet filter
- Built-in relief valve (Oxygen and Nitrogen models only)
- Maximum inlet: 3000psig
- Fabric reinforced neoprene diaphragm
- Dimensions: 7.5"W x 6"H x 5"D

Item Number	Description	Outlet Pressure (psig)	Inlet Fitting	Gas Service (CGA)
BS350I300	350 Series Acetylene 300 Pressure Regulator	2-15	300	Acetylene
BS350I580	350 Series Inert 580 Pressure Regulator	5-125	580	Inert
BS350ILPG	350 Series Alternate Fuel 510 Pressure Regulator	2-40	510	Alternate Fuel
BS350I510	350 Series Acetylene 510 Pressure Regulator	2-15	510	Acetylene
BS350I540	350 Series Oxygen 540 Pressure Regulator	5-125	540	Oxygen

450 Series Pressure Regulators

The Blue Star[™] 450 series pressure regulators provide heavy-duty welding and cutting performance in industrial, construction, and oilfield environments.

- Extra heavy duty single-stage design
- Forged brass body and housing cap
- · 2.5" gauges
- Stem type seat mechanism
- Sintered inlet filter
- Built-in relief valve (oxygen regulators only)
- Maximum inlet: 3000psig
- Stainless Steel diaphragms for consistent performance in extreme weather conditions.
- Dimensions: 7.5"W x 6"H x 5"D



Item Number	Description	Outlet Pressure (psig)	Inlet Fitting	Gas Service (CGA)
BS450I510	450 Series Acetylene 510 Pressure Regulator	2-15	510	Acetylene
BS450I540	450 Series Oxygen 540 Pressure Regulator	5-125	540	Oxygen
BS450I580	450 Series Inert 580 Regulator	5-125	580	Inert

Argon/CO2 Flowmeter Regulators



The Blue Star[™] Argon/CO₂ Flowmeter Regulators provide heavy duty performance for optimum controlled gas flow results. They are produced with a Teflon seat which filters out any contamination from entering. Also, our Teflon seat reduces CO₂ freeze-up.

1480 Series Flowmeter Regulators

- Piston type design
- Preset pressure set to 25 psig for accurate flow control
- Brass housing
- 50 CFH models
- Built-in relief valve
- Maximum inlet: 3000 psig
- 5/8" 18 RH(F) outlet fitting
- Teflon seat
- Argon, CO₂, and Argon mixed models

85 Series Flowmeter Regulators

- Diaphragm type design
- Preset pressure set to 25 psig for accurate flow control
- Chrome plated finish housing
- 50 and 70 CFH models
- Built-in relief valve
- Maximum inlet: 3000 psig
- 5/8" 18 RH(F) outlet fitting
- Teflon seat
- Argon, CO₂, and Argon mixed models

Item Number	Description	Outlet Pressure (psig)	Max Flow (CFH)	Inlet Fitting	Gas Service (CGA)
BS1480AR	1480 Series Flowmeter Regulator	25	50	580	Argon-Argon/CO2
BS1480ARWH	1480 Series Flowmeter Regulator With 6' Hose	25	50	580	Argon-Argon/CO2
BS1480CD	1480 Series Flowmeter Regulator	25	50	320	CO2
BS85AR580	85 Series Flowmeter Regulator	25	50	580	Argon-Argon/CO2
BS85CD320	85 Series Flowmeter Regulator	25	70	320	CO ₂



Argon/CO2 Flow Gauge Regulators



The Blue Star[™] Argon/CO₂ Flow Gauge Regulators provide light-medium duty performance for optimum controlled gas flow results.

- Argon "MIG Meter"
- Brass bonnets and bodies
- Argon and CO₂ models
- 0.020" orifice
- 2" Gauges

Item Number	Description	Max Flow	Inlet Fitting	Gas Service (CGA)
BSFGMR	Argon 580 Flow Gauge Regulator	50 SCFH	580	Argon
BS250I320	CO ₂ 320 Flow Gauge Regulator	50 CFH	320	CO2

Regulator Replacement Parts

Diaphragm



Item Number	Description	Gas Service (CGA)
BS250ACDIA	Diaphragm for 250 series Acetylene Regulator	Acetylene
BS250OXDIA	Diaphragm for 250 series Oxygen Regulator	Oxygen
BS350ACDIA	Diaphragm for 350 series Acetylene Regulator	Acetylene
BS350OXDIA	Diaphragm for 350 series Oxygen Regulator	Oxygen

Seat

	BS250ACSEAT
	BS250OXSEAT
	BS350ACSEAT
	BS350OXSEAT

It.

em Number	Description	Gas Service (CGA)
250ACSEAT	Seat for the Diaphragm for 250 series Acetylene Regulator	Acetylene
250OXSEAT	Seat for the Diaphragm for 250 series Oxygen Regulator	Oxygen
350ACSEAT	Seat for the Diaphragm for 350 series Acetylene Regulator	Acetylene
350OXSEAT	Seat for the Diaphragm for 350 series Oxygen Regulator	Oxygen

Adjustment Screw Key



Item Number	Description	Gas Service (CGA)
BS250ACKEY	Adjustment Screw Key for 250 series Acetylene Regulator	Acetylene
BS250OXKEY	Adjustment Screw Key for 250 series Oxygen Regulator	Oxygen
BS350ACKEY	Adjustment Screw Key for 350 series Acetylene Regulator	Acetylene
BS350OXKEY	Adjustment Screw Key for 350 series Oxygen Regulator	Oxygen

Replacement Pressure Gauges

The Blue Star[™] Replacement Pressure Gauges provide safe and efficient oxygen service, and performs for use on oxygen service, medical equipment, and other fuel gases which do not corroid brass or bronze. Designed for use with compressed gas regulators and where stem mounting is needed.

- Brass Case* or Painted Steel
- Lexan Crystals
- Safety Blow Out Backs
- Precision Movement
- 1/4" NPT (National Pipe Thread)
- High Visibility



Obstacles when working with pressure:

Oxygen Fuel Process should be set to all manufacturer setting recommendations in order for the job to be performed. Excessive pressure may lead to harsh flame; equipment damage; increased flashback probability. Lack of pressure may lead to lack of heat; inability to keep a stable flame; increased welding cutting tip probability.



Replacement Pressure Gauges

2-1/2"		eressure Gauges		1-1/2	t-1/2″	
		*B is Brass	s Case			
Item Number	Psig	Item Number	Psig	Item Number	Psig	
BS25X0030	30	BS2X0030	30	BS1X0030	30	
*BS25X0030B	30	*BS2X0030B	30	*BS1X0030B	30	
BS25X0060	60	BS2X060	60	BS1X0100	100	
*BS25X0060B	60	*BS2X060B	60	*BS1X0100B	100	
BS25X0100	100	BS2X0100	100	BS1X0200	200	
*BS25X0100B	100	*BS2X0100B	100	*BS1X0200B	200	
BS25X0200	200	BS2X0200	200	BS1X0400	400	
*BS25X0200B	200	*BS2X0200B	200	*BS1X0400B	400	
BS25X0400	400	BS2X0300	300			
*BS25X0400B	400	*BS2X0300B	300			
*BS25X0600B	600	BS2X0400	400			
· ·		*BS2X0400B	400			
		*BS2X0600B	600			
		High Pressur	e Gauges ase MB is Brass	Case		

Item Number	Psig	Item Number	Psig	Item Number	Psig
BS25X1MB	1000	BS2X1MB	1000	BS1X1MB	1000
BS25X4M	4000	BS2X3M	3000	BS1X4M	4000
BS25X4MB	4000	BS2X4M	4000	BS1X4MB	4000
		BS2X4MB	4000		
		Replacement	Gauge Cover		
Item Number		Item Number		Item N	umber
BS25CP		BS2CP		BS1CP	

Piston type mechanism

sintered bronze inlet filter

Rugged brass body

.

48

Balloon Fillers



Economy Balloon Filler Valve

Item Number

BS229

Balloon Filler with Contents Gauge

Plastic handtight CGA 580 inlet connection with

1-1/2" rear entry cylinder contents gauge

- Piston type mechanism
- Rugged brass body



Economy Balloon Filler with Contents Gauge

- Piston type mechanism
- Rugged brass body
- 1-1/2" rear entry cylinder contents gauge

Item Number BS229G

Mylar and Latex Balloon Filler with Contents Gauge

- Piston type mechanism
- Rugged brass body
- Drilled and tapped for tie hook and ribbon cutter
- Automatic shut-off mylar filler to prevent over filling and bursting of expensive mylar balloons
- Plastic handtight CGA 580 inlet connection with sintered bronze inlet filter
- 1-1/2" rear entry cylinder contents gauge

Item Number	Item Number
BS230HG	BSHGMYA







Premium Reinforced Welding Hose

With cover made of EDPM + NR Compound Fittings: USA BB Type - 9/16"-18"

Premium Welding Hose Specifications			
Size	ID (mm)	OD (mm)	Working Pressure (psi)
3/16″	5	11	
1/4″	6	13	
3/8"	9.5	16.5	
1/4" - 5/16"	6	13	
1/4 - 5/10	8	15	200
1/4" 2/0"	6	16	
1/4 - 3/8	9	16	
5/16" - 3/8"	8	16	
	9	16	

Grade R Single Line Hose Reels			
Item Number	Description	PSI Rating	Braid
HSI14XRLR	1/4" X 600' RED		
HSI14XRLG	1/4" X 600' GREEN	300	
HSI38XRL	3/8" X 600' GREEN		
HSI2XRL	1/2" X 600' GREEN		
HSI58XRL	5/8" X 600' GREEN		
HSI34XRL	3/4" X 600' GREEN		



Argon Hose With Connections				
Item Number	Description	PSI Rating	Connection Type	
HSIARGON6G	1/4" X 6' GREEN			
HSIARGON25G	1/4" X 25' GREEN			
HSIARGON50G	1/4" X 50' GREEN	250 Male Argor		
HSIARGON100G	1/4" X 100' GREEN			



Premium Twin Welding Hose





-	- 20	2	-	
			-	
6			2	
100	1.00		1.1	

Grade R Fitted Twin Hose			
Item Number	Description	PSI Rating	Connection Type
HTI1316X12	3/16" X 12.5'		
HTI1316X25	3/16" X 25'		
HTI1316X50	3/16" X 50'		
HTI1316X100	3/16" X 100'	250	B-B
HTI14X25	1/4" X 25'		
HTI14X50	1/4" X 50'		
HTI14X100	1/4" X 100'		

Grade T Fitted Twin Hose			
Item Number	Description	PSI Rating	Connection Type
HTI14X25T	1/4" X 25'		
HTI14X50T	1/4" X 50'		
HTI14X100T	1/4" X 100'		
HTI38X25T	3/8" X 25'		
HTI38X50T	3/8" X 50'	250	
HTI38X100T	3/8" X 100'	250	D-D
HTI1316X12T	3/16" X 12.5'		
HTI1316X25T	3/16" X 25'		
HTI1316X50T	3/16" X 50'		
HTI1316X100T	3/16" X 100'		

Grade R and T Twin Hose Reels				
Item Number	Description	PSI Rating	Braid	
HTI14XRL	1/4" X 600' GRADE R			
HTI14XRLT	1/4" X 600' GRADE T	250	1	
HTI38XRLT	1/4" X 600' GRADE T			

Hose Repair Kits

Item Number	Description
BSCK1	Hose Repair Kit 3/16", 1/4" A & B with C-1 Crimper
BSCK5	Hose Repair Kit 3/16", 1/4" A & B with C-5 Crimper
BSCK20	Hose Repair Kit 3/16" & 1/4" "B" Fittings with C-1 Crimper
BSCK22	Hose Repair Kit 3/16" & 1/4" "B" Fittings with C-5 Crimper
BSCK24	Hose Repair Kit 1/4", "B" Fittings with C-1 Crimper
BSCK26	Hose Repair Kit 1/4", "B" Fittings with C-5 Crimper
BSCK30	Hose Repair Kit 1/4", Argon Hose (NO CRIMPER)





Brass Fittings

Flashback Arrestors - Oxygen/Fuel Gas

- Fits all "B" size 9/16"-18 fittings (regulators, torches & hoses)
- Built-in check valve prevents reverse gas flow
- Stainless steel sintered element stops multiple flashbacks (no resetting required)
- U/L listed and 100% tested
- 2 PSI minimum pressure for gas flow



Item Number	Description	
BSFA10	Oxygen/Fuel Gas Set, Torch Style	
BSFA30	Oxygen/Fuel Gas Set, Regulator Style	

Quick Connects for Gas Welding Equipment

- Durable brass construction provides for long service life
- Designed for "B" size 9/16-18" fittings (regulators, torches & hoses)
- Design guided by ISO 7289 safety standards
- Non-interchangeable oxygen/fuel gas connectors to prevent cross connections
- Built-in check valves shut down upstream gases when disconnected



Item Number	Description
BSQDB10	Oxygen/Fuel Gas Quick Connect Set, Torch to Hose Style
BSQDB30	Oxygen/Fuel Gas Quick Connect Set, Regulator to Hose Style

Cylinder Adaptors

ł.

- Adaptors connect a regulator to a cylinder or other equipment when different CGA threads on the mating parts make a direct connection impossible.
- All brass, brazed construction



Item Number Adapts from Cylinder Service		To Regulator Service
BS61	CGA-300 Commercial Acetylene	CGA-510 POL Acetylene
BS315	CGA-510 POL Acetylene	CGA-520 "B" Tank Acetylene
BS317	CGA-520 "B" Tank Acetylene	CGA-510 POL Acetylene

	Hose Nuts					
-	For pressures "A" & "B" Size Oxygen & Fu Material: Bras	s up to 200 PSIG e el Gas ss				
	Item Number	Description	Thread Size	Gas Service	Qty Per Bag	

Item Number	Description	Inread Size	Gas Service	Qty Per Bag
BS7 / BS7-2PK	Oxygen, RH, "B" Size	9/16"-18 RH	CGA-022	25
BS8	Fuel Gas, LH, "B" Size	9/16"-18 LH	CGA-023	25



Brass Fittings

Barbed Hose Nipples

- For pressures up to 200 PSIG
- "A" & "B" Size
- For 1/4" or 3/16" Hose
- Oxygen & Fuel Gas
- Material: Brass



Item Number	Size	Length	For Hose Size	Qty Per Bag
BS17 / BS17-2PK	B-Size	1 7/16	1/4″ I.D.	25
BS18 / BS18-2PK	B-Size	1 7/16	3/16″ I.D.	25
BS19 / BS19-2PK	A-Size	17/32	3/16″ I.D.	25
BS20 / BS20-2PK	B-Size	1 7/16	3/8" I.D.	25

Hose Couplers

- Pressure up to 200 PSIG
- B Size, Oxygen & Fuel Gas
- Material: Brass

Item Number	Description	Inlet Thread Size	Outlet Thread Size	Qty Per Bag
BS30 / BS30-2PK	Oxygen Hose Coupler, B Size	9/16-18 RH	9/16-18 RH	25
BS31 / BS31-2PK	Fuel Gas Hose Coupler, B Size	9/16-18 LH	9/16-18 LH	25

Regulator Outlet Bushings

- Pressure up to 200 PSIG
- B Size, Oxygen & Fuel Gas
- Material: Brass

Item Number	Description	Inlet Thread Size	Outlet Thread Size	Qty Per Bag
BS32 / BS32-2PK	Oxygen Regulator Outlet Adaptor	1/4 Male NPT	9/16-18 RH	25
BS33 / BS33-2PK	Fuel Gas Regulator Outlet Adaptor	1/4 Male NPT	9/16-18 LH	25

- Hose Splicers
- Pressures up to 200 PSIG
- Hexagon, round, spiral or no center stop
- Material: Brass





Brass Fittings					
J	Hose B	arb Adaptors			
Pressures up to 200 NPT x Hose Barb Material: Brass	PSIG				
Item Number BS541	Description	Inlet Threa	id РТ	Hose Size	
20011			•		
Pressures up to 200 Use with all B size in Material: Brass	PSIG ert arc nipples				
Item Number	Description	Thread Size	Gas Service	Qty Per Bag	
BSAW14 / BSAW14-2PK	Water, Male LH	B Size - 5/8-18	CGA-033	25	
BSAW14A / BSAW14A-2P	K Inert Gas, Male RH	B Size - 5/8-18	CGA-032	25	
Material: Brass		Circ		Othe Day Day	
Item Number	Description	Size	Hose Size	Qty Per Bag	
BSAW177 BSAW17-2FK BSAW20	Inert Arc Nipple, 2- 7732 Loi	B Size, 5/8-16 B Size, 5/8-16	3 3/8 I.D.	25	
	In out Ave				
Pressures up to 200 Female x Female Material: Brass	PSIG				
Item Number		Descriptio	on		
BSAW430		5/8-18 RH Female to 5/	8-18 RH Female		
	"Y" Connectors	s with Shut-Off Valv	es		
	DCIC				
Pressures up to 200 For use with two cut High precision shut- Swivel Nut Inlet Material: Brass	ting or welding hoses at once off valves	9			

Item Number	Inlet	Outlet	Gas Service
BS111	BS111 Oxygen 9/16-18 RH Female, Swivel Nut		CGA-022
BS112 Fuel Gas, 9/16-18 LH Female, Swivel Nut		9/16-18 LH Male	CGA-023
BS411 Argon, 5/8-18 RH Male Swivel Nut		5/8-18 RH Female	CGA-032

WWW.TECHNIWELDUSA.COM



Brass Fittings

Brass Shut-Off Valves

- Precision shut-off valves
- Oxygen, fuel gas and non-corrosive gases
- Material: Brass



Item Number	Inlet	Outlet	Gas Service	Pressure Rating
BS215FR	5/8-18 RH Male	5/8-18 RH Female	Inert	200 PSIG

Hose Ferrules

- Pressures up to 200 PSIG
- Material: Brass

To determine proper ferrule size, measure OD of the hose (as a decimal) and go up to the next larger size ferrule ID on the chart below.



Item Number	Inside Diameter	Length	Qty Per Bag
BS625	0.525	0.500 ln	25
BS626	0.548	0.478 ln	25
BS769	0.450	0.562 ln	25
BS3588 / BS3588-2PK	0.562	0.750 ln	25
BS4750 / BS4750-2PK	0.475	0.688 In	25
BS7322	0.500	1.000 In	25
BS7323 / BS7323-2PK	0.525	1.000 In	25
BS7325 / BS7325-2PK	0.562	1.000 In	25
BS7326 / BS7326-2PK	0.593	1.000 In	25
BS7327	0.625	1.000 In	25
BS7329	0.687	1.000 In	25
BSKK	0.575	0.484 In	25

Dual Hose Brace

- Pressures up to 200 PSIG
- Oval shaped design
- Material: Brass



Item Number	Dimensions	Length	Metal Gauge	Qty per Bag
BS9940P	.535 x 1.071 ln	.750 In	.024 In	25



Brass Fittings

Brass Manifold Block For Inert Gases

- Flame tested in USA for superior performance
- American quality control
- Contain copper threading and are made from complete solid bar stock where applicable
- Solid, not hollow, heavy-duty gas apparatus accessories to increase life, heat dissipation, and overall performance



Item Number	Swivel Connection	End Connection	CGA
BSMB70	.960-14 NGP-RH-Male	.960-14 NGP-RH Female (6)	580

CGA Nuts & Nipples

BLUE Star[™] has a wide range of various brass Nuts & Nipples.



Item Number	Part	CGA	Description	Pressure Rating
BS62	Nut	540	Brass, .908-14 NGO, RH Female	3000 PSIG
BS66SF	Nipple	540	Brass, 1/4 NPT, 2-1/2" Long with Filter	3000 PSIG
BS92	Nut	580	Brass, .960"-14 NGO, RH Male	3000 PSIG
BS153	Nipple	500/510/580/590	Brass 1/4" NPT, 3" Long	3000 PSIG
BS153SF	Nipple	500/510/580/590	Brass, 1/4" NPT, 3" Long with Filter	3000 PSIG
BS152	Nut	510	Brass, .880-14 NGO, LH Male	3000 PSIG
BSCO2	Nut	320	Brass, .830-14 NGO, RH Female	3000 PSIG
BSCO5 BSCO5-2PK	Washer	320	Fibre, Flat Washer (50/BAG)	3000 PSIG
BSCO6	Washer	320	Teflon, Flat Washer (25/BAG)	3000 PSIG
BSCO6N	Washer	320	Teflon, Flat Washer (100/BAG)	3000 PSIG

Cylinder Carts

- Easily setup and broken down gives all new meaning to transportable cylinder carts i.
- Fully UPS-able no need for expensive LTL shipping .
- Powder Coated paint ensures minimal chipping and flaking .
- Easy quick disconnect wheel replacement ensures minimal downtime .
- Heavy-Duty scratch resistant powder coated paint







Item Number	Description
BSCYT12CHF	Cylinder Cart Medium 12







Item Number	Description
BSCYT16FLTWD	Cylinder Cart Medium 16

56

WWW.TECHNIWELDUSA.COM



Gas Cylinder Hook

- High end powder coated paint
- American quality control
- Keep your expensive ADF welding helmet clean and safe.
- Works on most all tanks!
- Holds welding helmet, jacket, tools and more!
- Install or remove with the regulator/flow meter hooked up
- Heavy-Duty fully assembled steel construction



Tote

- Blue plastic tote accessory ideal for oxy-fuel welding needs
- Lightweight for easy portability
- Made of tough lightweight polypropylene
- UL Listed
- Parts are Victor Compatible

Item Number	Description
BS1020	Blue Star Plastic Tote



Track Torch

The Blue Star[™] Track Torch is a precision automatic gas cutting torch. This tractor-type machine can be used on its own track for straight line cutting and a variety of welding operations. With the optional round rails, the BSTT200 can be used for circle cutting as well.

Features:

- Equipped with a single cone speed changer (mechanical nonstage speed changer) to materialize substantial compact and lightweight design
- Based on the double cone speed changer that has been successfully used on other versions
- Improved mobility and operability of the machine will contribute to the accuracy and labor saving of the cutting operation

Motor

Package includes:

- Main cutting unit
- Torch holder with rack
- Hose 600 mm
- Cabtyre cord 5m
- Tip ANM 1/32", 3/64", 1/16"
- 6' Track



	1500 RPM	150 - 800 mm/min	5-50 mm		110V (±10%)		
	Item Number						
		BSTT200 - (Track 1	torch and 1 track)				
	BSTT200TH - (Torch holder and rack)						
BSTT200TORCH - (Replacement torch)							
BS33 - (#33 Nipple fitting)							
	BS32 - (#32 Nipple fitting)						
TRACK - (Replacement 6' track)							

Cutting Speed

Track

UL Listed			
ltor	m Numbor	Description	Sizo

Item Number	Description	Size
TRACK	F/BSTT200 Cutting Machine	6 ft

58

WWW.TECHNIWELDUSA.COM



FOR ALL YOUR CHEMICAL RELATED PRODUCTS

Quality Standards

Techniweld USA's, *Chem Guard*[™] aids in suppling the needs of welders in order to provide a safe welding and working environment. Chem Star[™] provides all your chemical related products.



Anti-Spatter **60** Zinc Galvanizing Spray All-Purpose Brazing Flux Aluminum Brazing Flux Chem Sharp Kit Tip Dip 337

- Lube Pads & Lubricant 61 Soap Stones Anti-Spatter Coolant Fluids
 - Metal Working Fluid 62 Hand Sanitizer Wipe Gel Hand Sanitizer

Anti-Spatter

CS777 (16 0Z.)

Chem Star's Anti-Spatter for MIG gun nozzle and welding surfaces new quick dry formula to save time and reduce cost.

FEATURES AND BENEFITS

- Non-flammable
- · Paint compatible
- Reduces clean up time
- Protects nozzles, diffusers, and tips
- Prevents weld spatter from sticking
- Prevents spatter adhesion on surface
- Reduces spatter build-up on MIG nozzles
- Heat-resistant to withstand high-temperature use
- Contains no silicones,fluorocarbons, or trichloroethane



Zinc Galvanizing Spray CSBGALV (Bright Finish)

FEATURES AND BENEFITS

- · Prevents rust and corrosion
- · Protects welded surfaces
- · Repairs Hot-Dip Galvanizing with a matte finish

CSMGALV (Matte Finish)

- Fast-Drying
- Heat resistant to 500°F
- May be top-coated



All-Purpose Brazing Flux

CHEMALLFLUX (16 0Z.) CHEMALLFLUX1/2 (16 0Z.)

All-purpose brazing flux is used with low fuming bronze and nickel silver brazing alloys, steel, cast iron, copper-base alloys. It is applied to the rod by preheating the rod end and dipping the rod into flux.



Chem Sharp Kit

CSCHEMSHARPK

Chem Star's Tungsten Sharpening Kit is a Chemical sharpener for tungsten points.

FEATURES AND BENEFITS

60

- Economical- Over 500 perfect sharpenings without grinding or leaving the work area, and without contaminating the tungsten.
- Eliminates the probability of chipping
- Extends the life points 2 to 4 times
- Produces the perfect point every time

CHEMST*R

CHEM-SHARP OVER 500 SHARPENINGS PER JAR

Aluminum Brazing Flux

CS612 (8 0Z.)

Chem Star's all-purpose flux for torch brazing with aluminum alloys. It is especially effective with common aluminum base materials such as 1100, 3003, and 6061. The recommended filler metals are 4047 (718) and 4145.



Tip Dip 337

CS337 (16 OZ.)

Prevents spatter build-up. For protection of MIG gun nozzles, tips, and positioners

FEATURES AND BENEFITS

- Made in the USA
- Product is non flammable and odorless
- Product does not contain hydrocarbon solvents
- Extends the life of MIG consumables
- Product is safe, non-toxic and does not contain silicones



CHEM ST*R



HEMST

LUBE PAD

UBRICAN

Lube Pads White

CS007061

FEATURES AND BENEFITS

Reduces tip and liner wear, burtback, wire jams and promotes smoother arc feed
 Cuts rust and dirt

For all types of wire. Excellent for aluminum wire. 6 pads per pack

Lube Pads Black

CS007060

FEATURES AND BENEFITS

- Reduces tip and liner wear, burtback, wire jams and promotes smoother arc feed - Cuts rust and dirt

For all types of STEEL wire. Not recommended for aluminum wire. Pre-treated with lube. 6 pads per pack

Lube Pad Lubricant

CS007040

FEATURES AND BENEFITS

- 8 f. oz. (236 mL)
- Revitalize used pads
- Decreases jamming downtime
- Increase tip and liner life
- Removes dirt
- Cuts rust

Soap Stones

SSFLAT (Flat Soapstone) CSSSHF (Flat Soapstone Holder) SSROUND (Round Soapstone) CSSSHR (Round Soapstone Holder) SSFLATTHIN (Thin Soapstone) CSSSHTHIN (Thin Soapstone Holder)

#1 White select stone only

 Techniweld USA Soapstone is mined & cut, not pressed from scraps

 Techniweld USA Soapstone, being cut from mined stone holds point much longer

Anti-Spatter

CS500

(1 Gallon, 5 Gallon & 55 Gallon)

Chem Star's Anti-Spatter for MIG gun nozzle and welding surfaces new quick dry formula to save time and reduce cost.

FEATURES AND BENEFITS

- Non-flammable
- Paint compatible
- Reduces clean up time
- Protects nozzles, diffusers, and tips
- Prevents weld spatter from sticking
- Prevents spatter adhesion on surface
- Reduces spatter build-up on MIG nozzles
 Heat-resistant to withstand high
- temperature use
- Contains no silicones,fluorocarbons, or trichloroethane



CECHINA CONTRACTOR OF THE CONTRACTOR OF TO TACTOR OF TO TACTOR OF TO TACTOR OF TOTACTOR OF

Coolant Fluids

KCI1625501 (Blue Coolant) KCI1625502 (Red Coolant) KCI1625503 (Green Coolant)

Specially formulated for use in all water circulating systems. Recommended for water cooled Plasma, MIG, TIG, Resistance Welding Systems, and general industrial applications.



Metal Working Fluid

CSMWF (1 Gallon)

Chem Star Metal Working Fluid is used broadly in machine shops as a multi-functional cutting fluid. It is primarily formulated to cool and lubricate the contact point of the tool and the work piece.

FEATURES AND BENEFITS

- · Minimal separation- excellent emulsion even with hard water · Cooling maximized by metal wetting. In addition, promotes good
- chip settling · Good stability in storage-minimal tendency to turn rancid
- · Helps prevent rusting or corrosion of the machined metals
- Minimizes surface foam
- Speeds the release of entrained air which could cause pump cavitation
 Helps to prevent flash rust
- · Good rust protection for steel work and machined parts even when water/oil emulsion ratios are 80:1
- · Minimal foaming- possibility of sump overflow minimized
- · Good ability to control bacterial growth and rancid odors - Helps control the growth of bacteria, which is a constant problem in soluble oil circulating systems due to outside contamination
- CHEM ST*R CSMWF Metal Working Fluid

Hand Sanitizer Wipe

CSHANDWIPE (6 ML.)

6 x 6 Hand Sanitizer Wipe. 75% V/V Isopropyl Alcohol Solution. Made in USA.



Gel Hand Sanitizer

CSHS1LP (1 L. PUMP BOTTLE) CSHS1G (1 GL. BOTTLE)

Gel Hand Sanitizer. **Ethyl Alcohol.**

CHENISTER HAND SANITIZER Fights Germs and Bacteria! of Germs1 A NEW PLOT AND

CHEMSTAR HAND SANITIZER

Kills 99% of Germal



METALS

Quality Standards

FILLER

Techniweld USA's, Filler Metals™

- Mild and Low Alloy Steel Bare Wire, Electrode, Flux Cored Wire, Coated Electrode 64-69
 - Stainless Steel Bare Wire, Coated Electrodes, Flux Cored Wire 69-74

SA

- Aluminum Alloys 74
 - Brazing Alloys **74**
 - Bronze Alloys 75-76
- Nickel Alloy Bare Wire, Coated Electrodes 76-78
 - Cobalt Alloys 78-79
 - Titanium and Zirconium Alloys 79-80
 - Aerospace Alloys 80-81
 - Hardfacing Electrodes, Wires 81-82
 - Maintenance & Repair/Hardfacing 83
 - Aluminum Alloys 83
 - Maintenance Alloys 84-85

TECHNIVELDUSA FILLER METALS

FOR ALL YOUR MILD STEEL, ALUMINUM, STAINLESS, STEEL, NICKEL, AND ALL OTHER ALLOYS

Mild and Low Alloy Steel Bare Wire

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ER70S-2	93.2 ksi	78 ksi	25 %	ER70S-2 is triple deoxidized with aluminum, titanium and zirconium as well as manganese and silicon, makes this wire capable of producing efficient welds when the steel to be welded is rusty, dirty, undercoat painted or has mill scale. Premium wire for welding mild and low alloy steels as well as thin walled materials. It is recommended for pipe welding and for root passes in heavy vessel construction. Also for welding steels of which surface will be coated.
ER70S-3	78 ksi	60 ksi	25 %	A premium mild steel solid wire suitable for general purpose welding over clean to light levels of rust and mill scale. Frame fabrication, automotive structures, farm implements, construction equipment, pressure vessels, pipe fabrication, railcar construction and repair, general fabrication. Widely used in high-speed robotic and automatic welding applications and semi-automatic applications.
ER70S-6	87 ksi	74 ksi	28 %	A premium mild steel solid wire formulated to provide high quality welds and trouble-free performance from heavy duty, high speed, spray transfer applications all the way to light duty low speed, short arc applications. Frame fabrication, automotive structures, farm implements, construction equipment, pressure vessels, pipe fabrication, railcar construction and repair, general fabrication. Used in high-speed robotic and automatic welding applications and semi-automatic applications.
ER70S-B2L	75 ksi	58 ksi	19 %	ER70S-B2L is identical to ER80SB2, except for the low-carbon content (0.05 % max), which makes it more resistant to cracking and more suitable for welds to be left in the as-welded condition or when the accuracy of the post weld heat treatment operation is questionable. A preheat and interpass temperature of not less than 275°F should be maintained during welding. ER70S-B2L is used to weld 1/2Cr-1/2Mo, 1Cr-1/2Mo, and 1-1/4Cr-1/2Mo steels for elevated temperatures and corrosive service. It is also used for joining dissimilar combinations of Cr-Mo and carbon steels.
ER80S-B2	80 ksi	68 ksi	19 %	ER80S-B2 requires careful control of preheat, interpass temperatures, and post-weld heat treatment to prevent cracking. ER80S-B2 is classified after post-weld heat treatment. Special care must be taken when using it in the as-welded condition due to higher strength levels. Recommended shielding gas is CO2 or an Argon/CO2 mixture. Used to weld 1.25% chrome50% moly steels for elevated temperatures and corrosive service.
ER80S-B6	80 ksi	68 ksi	19 %	ER80S-B6 is used for elevated temperature creep service and with corrosion resistance against steam, hot hydrogen gas and high sulfur crude oils. A preheat and inter pass temperature of not less than 350°F should be maintained during welding. ER80S-B6 is used for joining 5%Cr and 1/2% molybdenum steels such as A336 Gr. F5, A155 Gr. 5 Cr, A335 Grs. P5 and P5b, A217 C5 (cast) and A199/ A213 Grs. T5 and T5b. Used primarily in the petrochemical and refinery industries.
ER80S-B8	80 ksi	68 ksi	19 %	ER80S-B8 is used for joining 9Cr-1Mo air hardening steels for elevated temperature creep service, and with corrosion resistance from steam, hot hydrogen gas, and high sulfur crude oils. These include steels such as A335 Grade P9, A336 Grade F9, A217 C12 (Cast), and A199, A200, and A213 grade T9. A preheat and interpass temperature of not less than 350°F should be maintained during welding. ER80S-B8 is used primarily in the petrochemical and refinery industries. It was designed for welding materials of similar composition.
ER80S-D2	106 ksi	90.2 ksi	22.5 %	A mild steel solid wire that contains 0.50 % Molybdenum for increased strength and high levels of manganese and silicon to provide good wetting, and good rust and scale tolerance. ER80S-D2 will give radiographic quality welds with excellent bead appearance in both ordinary and difficult-to-weld carbon and low alloy steels. It is suitable for single and multiple pass welding of carbon and low alloy steels and higher strength steels in the as welded and post weld heat treated conditions.
ER80S-B3L	N/A	N/A	N/A	ER80S-B3L is identical to ER90S-B3 except for the low-carbon content (0.05 percent maximum) and, therefore, the lower strength levels. It exhibits greater resistance to cracking and is more suitable for welds to be left in the as-welded condition. ER80S-B3L was previously ER90S-B3L. The strength requirements and classification designator have been changed to reflect the true strength capabilities of the chemical composition. Special care must be used when using it in the as-welded condition due to higher strength levels.
ER80S-Ni1	79 ksi	63 ksi	30 %	ER80S-Ni1 wire deposits weld metal containing a nominal 1% nickel, similar to an E8018C3 coated electrode. ER80S-Ni1 is used for welding low alloy high-strength steels that requires good toughness at temperatures as low as -50°F (-46°C).
ER80S-Ni2	91.3 ksi	78.3 ksi	28 %	ER80S-Ni2 is a mild steel solid wire that contains over 2% nickel. It will give radiographic quality welds with excellent bead appearance and is suitable for single and multiple pass welding. ER80S-Ni2 is used for welding of fine grain structural steels if low temperature impact values are required. For service temperatures down to -76 °F (-60 °C).
ER90S-B3	80 ksi	68 ksi	19 %	ER90S-B3 is a solid wire used to weld 2.25% chromium- 1% molybdenum steels. Careful control of preheat and interpass temperatures and post weld heat treatment is essential to prevent cracking. Used for high-temperature, high-pressure piping, pressure vessels, and in oil refinery and chemical plants.
ER90S-B9	110.1 ksi	97.1 ksi	20 %	ER90S-B9 is a solid wire suitable for 9% chromium steels such as P91, T91, and F91. ER90S-B9 is used to weld high-temperature steels for hot hydrogen service. Applications include steam generation and petrochemical equipment.
ER100S-1	104 ksi	92 ksi	16 %	ER100S-1 produces high tensile strength, high impact resistant weld deposits that retain their toughness to -70°F making it suitable for low temperature critical applications. ER100S-1 is meant for the welding of HY80 and HY100 steels.



AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ER110S-1	114 ksi	98.5 ksi	15 %	ER110S-1 produces high tensile strength, high impact resistant weld deposits that retain their toughness to -70°F making it suitable for low temperature critical applications. ER110S-1 is meant for the welding of HY100 steels as well as a variety of structural applications where tensile strength requirements exceed 100 ksi (690 MPa).
ER120S-1	120 ksi	105 ksi	15 %	ER120S-1 deposits high-strength, very tough weld metal for critical applications. ER120S-1 can be welded in all positions. Recommended shielding gas is CO2 or Argon/O2 mix. ER120S-1 was originally developed for welding HY100 steels for military applications, it is also used for a variety of structural applications where tensile strength requirements exceed 100 ksi (690 MPa), and excellent toughness is required to temperatures as low as -60°F (-51°C).
RG-45	45 ksi	N/A ksi	22 %	A copper coated gas welding rod that is used for welding ordinary low-carbon steel up to $\frac{1}{4}$ " thick. It is recommended where ductility and machinability are most important. This rod is excellent for the welding of steel sheets, plates, pipes, castings and structural shapes where the minimum tensile strength requirement does not exceed 45 ksi (310 MPa).
RG-60	60 ksi	N/A ksi	20 %	The high silicon and manganese composition removes impurities from the molten metal thereby eliminating the need for flux. RG-60 is used to produce high tensile strength quality welds on low-carbon and low alloy steels. It is also used for the oxy-fuel gas welding of carbon steels, where the minimum tensile strength requirement does not exceed 60 ksi (415 MPa).

Mild and Low Alloy Steel Electrode

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E6010	76 ksi	61 ksi	26 %	E6010 is a quick-starting, cellulosic mild steel electrode that provides outstanding arc stability, penetration and wash-in. It produces an X-ray quality weld with light slag that's easy to remove. Can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80. Used for construction and shipbuilding, general purpose fabrication, maintenance welding, out-of-position X-ray welds, pipe welding and vertical and overhead plate welding.
E6010 Plus	72 ksi	60 ksi	25 %	E6010 Plus is a quick-starting, cellulosic mild steel electrode that provides outstanding arc stability, penetration and wash-in. It produces an X-ray quality weld with light slag that's easy to remove. It features enhanced weldability and increased physical properties. E6010 Plus can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80. Used for construction and shipbuilding, general purpose fabrication, maintenance welding, out-of-position X-ray welds, pipe welding and vertical and overhead plate welding.
E6011	77.7 ksi	63.2 ksi	25 %	A quick-starting mild steel electrode with stable arc characteristics and excellent penetration that produces a fine spray transfer. Excellent choice for welding on steels that cannot be completely cleaned or where the steel is rusty or painted. The slag detaches easily. Galvanized steel work, general fabrication, railroad cars, shipbuilding, construction, light sheet metal fabrication and structural work.
E6013	72.6 ksi	61.3 ksi	26.5 %	An all-purpose electrode that provides excellent arc stability. Can be used for light gauge metal and offers sufficient penetration for welding on heavier assemblies with light slag that's easy to remove. Ideal for general purpose fabrication, metal buildings, machine parts and shaft build-up. Suitable for welding hard to reach areas and spot welding.
E6022	60 ksi	N/A Min	N/A Min	Designed for welding roof decking to support beams and other similar applications where burn-through spot welds with full penetration are required. It is also used to weld through galvanized or painted roof decking and can be used on plated and dirty decking as well. Burn-through spot welds for roof decking and sheet metal, rapid downhill welding to join light gauge materials.
E7014	79 ksi	68.1 ksi	27.5 %	A versatile, all-position electrode, with a smooth stable arc, that can be used with either AC or DC (electrode negative or electrode positive) power. It has a rutile base with an iron powder addition that serves to increase welder-appeal with its outstanding deposition rate and speed of travel. The slag detaches easily. Construction of frames, heavy sheet metal, and machine bases.
E7016	70 ksi	58 ksi	22 %	E7016 is a basic coated electrode for making vertical-down fillet joints with a flat appearance at high speed. The slag is of the self-lifting type. E7016 is especially good on AC and is used in shipbuilding and structural engineering.
E7018/E7018-1	78.5 ksi	65.5 ksi	28 %	A general purpose electrode that provides excellent start and restart capabilities, and a smooth and virtually spatter free arc for superior weldability. Slag removal is one of the best and in many cases is self-peeling. It operates smoothly even on somewhat dirty or rusty surfaces. Petrochemical plants (pressure vessels, fittings, piping), steel structural work, field erections (buildings and bridges); mining equipment; some pipelines; rail car and locomotive construction; heavy equipment fabrication and repair, shipbuilding, drilling rigs; farm machines.
E7018 AC	81.2 ksi	73.1 Min	29.5 %	E7018 AC is highly recommended for applications using small 208/230V, single phase AC welders, E7018AC has good operator appeal, excellent re-striking characteristics and an extremely stable arc. E7018 AC is also an excellent choice for skip or tack welds. The slag is self-removing in most applications. E7018AC will work well on all AC power sources and performs exceptionally well on utility-type welders.
E7018-A1	89 ksi	77 ksi	27 %	E7018-A1 is an outstanding welding electrode for welding the 0.50% molybdenum steel and other low alloy steels. The specially formulated coating resists moisture pick-up of high heat and humidity. E7018-A1 offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. E7018-A1 is used primarily for pressure vessel applications. This includes construction and maintenance of boilers, piping and tubing.
E7024	82 ksi	72 ksi	25 %	An excellent high-speed electrode for fillet welds. It is exceptionally fast when used down hand in properly designed weld joints or in horizontal fillet welds where equal leg fillets are desired. When a drag welding technique is used, it operates well on either AC or DC (electrode negative) power. E7024 minimizes slag entrapment, and the slag is self-removing in most applications. Earth moving equipment, mining machinery, plate fabrication, railroad cars, structural, shipbuilding and mobile trailers.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E8018-B2	102 ksi	91 ksi	21 %	Used to produce high tensile strength quality welds on higher strength steels greater than 80,000 pounds. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity, which helps prevent hydrogen cracking and aids in elimination of starting porosity. Used for fabrication and maintenance of boilers and piping made of heat resisting Cr-Mo alloyed steels. Weld metal is resistant to working temperatures up to 1058°F.
E8018-B3L	93.2 ksi	78 ksi	25 %	E8018-B3L is a low-carbon electrode designed for welding 2-¼ Cr - 1% Mo steels. The low-carbon content contributes to its crack resistance. It offers good arc stability, low spatter and high deposition efficiency. E8018-B3L's extra low-carbon content proves microstructure stability during high-temperature service applications, and pressure piping such as found in steam power generating equipment, boiler and heat exchanger steel tubes, marine equipment, chemical processing equipment and oil refinery equipment.
E8018-B6	96 ksi	80 ksi	24 %	E8018-B6 is an iron powder, low-hydrogen covered electrode designed for the welding of 5% Cr, 1/2% Mo steels and other chromium-molybdenum steels. Its special coating reduces moisture pick-up, minimizing hydrogen cracking and starting porosity. It strikes and re-strikes easily, and provides a stable arc that is easy to control. E8018-B6 is primarily used in the petrochemical and petroleum industries. Excellent for tubes, tube sheets, and plate steels for high-pressure hydrogen service.
E8018-B8	93 ksi	72 ksi	21 %	E8018-B8 is designed for joining creep-resistant, high chromium (9% Cr) alloys of similar composition. Its iron powder low-hydrogen coating reduces moisture pick-up and helps to minimize hydrogen cracking and starting porosity. It is the best choice when service conditions are too severe for E9018B3 or E8018B6. Ideal for use in the petrochemical and petroleum industries. Excellent for tubes, tube sheets, and plate steels for high-pressure hydrogen service, as well as 9% Cr, 1% Mo steels.
E8018-C1	91 ksi	80 ksi	26 %	E8018-C1 outstanding characteristics provide good puddle control with excellent wetting action and tie in, good arc characteristics and easy slag removal. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity, that helps retard hydrogen cracking and aids in elimination of starting porosity. E8018-C1 is designed for use in the welding of nickel bearing steels for low temperature applications where toughness of the weld metal is important. Such applications include ship building, storage, piping and tanks used in the storage of gases.
E8018-C2	95 ksi	82 ksi	24 %	E8018-C2 is excellent for low temperature applications requiring tensile strengths greater than 80,000 psi and for welding 2% to 4% nickel steels. This electrode features a special formulated coating designed to reduce moisture pick-up and help minimize hydrogen cracking and starting porosity which makes it an outstanding choice in conditions of high heat or humidity. Used in shipbuilding, piping and gas storage tanks, as well as in the welding of AR and T-1 steels.
E8018-C3	82 ksi	70 ksi	28 %	E8018-C3 is designed for 80,000 tensile strength applications, and also 1% nickel applications. This electrode provides excellent puddle control with good wetting action and tie in. It offers good arc characteristics and easy slag removal, and will provide notch toughness of 20 ft lbs. at -40°F. The coating is specially formulated to resist conditions of high heat and humidity and offers resistance to moisture reabsorption. E8018-C3 is designed for use on 80,000 tensile steels of both commercial and military applications.
E801X-B6	89 ksi	73 ksi	23 %	E8015-B6, E8016-B6 & E8018B6 electrodes are used for welding base metal of similar composition (alloy 501 & 502), usually in the form of pipe or tubing. The alloy is an air-hardening material; therefore, when welding with E8015-B6, E8016-B6 & E8018-B6 preheat and post weld heat treatment are required. E801X-B6 was formally classified as E502 stainless steel under AWS A5.4-81. It is used in welding ASTM A 387 Grade 5 base material. X-denotes 5,6, & 8
E801X-B8	100 ksi	79 ksi	23 %	E8015-B8, E8016-B8 & E8018-B8 electrodes are used for welding base metal of similar composition (alloy 501 & 502), usually in the form of pipe or tubing. The alloy is an air-hardening material; therefore, when welding with E8015-B8, E8016-B8 & E8018-B8 preheat and post weld heat treatment are required. E801X-B8 was formally classified as E505 stainless steel under AWS A5.4-81. It is used in welding ASTM A 387 Grade 9 base materials. X-denotes 5,6, & 8
E9015-B9	122 ksi	104 ksi	18.2 %	E9015-B9 is designed for joining creep-resistant, high chromium (9% Cr-1% Mo-V) alloys of similar composition and is the best choice when service conditions are too severe for E9018B3, E8018B6, OR E8018B8 with improved creep resistance. Ideal for use in the petrochemical and petroleum industries, and for use in high-temperature service applications such as power generation and allied industries. Excellent for welding tubes and tube sheets, pipe and plate steels for high-pressure hydrogen service, as well as 9% Cr-1% Mo-V steels.
E9018-B3	112 ksi	95 ksi	21 %	Used to produce high quality welds on higher strength piping, castings and forgings. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity, which helps prevent hydrogen cracking and aids in elimination of starting porosity. Used for welding boilers and piping made of heat resisting Cr-Mo alloyed steels, and nitrated steels. Weld metal is resistant to working temperatures up to 1112°F.
E9018-B3L	102 ksi	85 ksi	21 %	E9018-B3L is an outstanding electrode for welding high-strength piping, where cracking is a problem. It provides excellent notch toughness, 20 ft lbs minimum at 100°F. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity and offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal. E9018-B3L is used in welding chrome-moly pipes and boiler work.
E9018-B9	120.2 ksi	104.4 ksi	18 %	E9018-B9 is an iron powder low-hydrogen coated electrode designed to weld the modified 9% Chromium – 1% Molybdenum steels known by the designations T91, P91 or Grade 91. These steels are designed to provide improved creep strength, toughness fatigue and oxidation, and corrosion resistance at elevated temperatures. The low-hydrogen powder covering has good deposition with smooth arc, low spatter and easy slag removal. E9018-B9 is commonly used in maintenance and fabrication of base metals in the power generation, steam piping and equipment found in elevated operating temperatures.
E9018-M	100 ksi	89 ksi	24 %	E9018-M is an outstanding welding electrode for welding higher strength steels with tensile strength in excess of 90,000 psi. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. E9018-M offers resistance to moisture reabsorption to help prevent hydrogen cracking and aids in elimination of starting porosity. E9018-M is used for joining HY-90, HY-80, T-1 and other high tensile steels.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E10018-D2	112 ksi	97 ksi	25 %	E10018-D2 features good arc characteristics, crack resistance and ductility, is outstanding for welding low alloy, high-strength steels and manganese-molybdenum steels requiring tensile strengths of at least 100,000 psi. It's specially formulated coating, designed to reduce moisture pick-up and minimize hydrogen cracking and starting porosity, makes it great for conditions of high heat and humidity. E10018-D2 is excellent for manganese-molybdenum castings, alloy forgings, structural, and for pressure vessels in either as welded or stress relieved conditions.
E10018-M	104.4 ksi	95 ksi	24 %	Features good arc characteristics, crack resistance and high ductility. For welding low alloy, high-strength steels and manganese-molybdenum steels requiring tensile strengths of at least 100,000 psi. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity, which helps prevent hydrogen cracking and aids in elimination of starting porosity. Excellent for manganese-molybdenum castings, alloy forgings, structural, and for pressure vessels in either as welded or stress relieved conditions.
E11018-M	110 ksi	101 ksi	21 %	Features good arc characteristics, low spatter, easy slag removal, crack resistance, and high ductility. This electrode provides excellent puddle control with good wetting action and tie in. For welding low alloy, high-strength steels which require weld joints with 100,000 psi minimum tensile strength, good ductility and crack resistance along with high notch toughness at temperatures of -60°F. Low alloy steels typically welded with E11018 include HY-80, HY-90, HY-100 and T-1 steels.
E12018-M	138 ksi	116 ksi	20 %	Features good arc characteristics, low smoke level and high ductility. For welding low alloy, high-strength steels requiring tensile strengths of at least 120,000 psi. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity, which helps prevent hydrogen cracking and aids in elimination of starting porosity. Slag removal is quick and easy. Typical applications include low alloy steels, forgings, castings, plate and pressure vessels, tempered steels, cementation steels, and other steels.

Mild and Low Alloy Steel Flux Cored Wire

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E70C-6M	87.2 ksi	78.9 ksi	25 %	A carbon steel, composite metal cored electrode for gas shielded arc welding. This electrode is for single and multiple-pass welding of carbon and certain low alloy steels, where a minimum tensile strength of 70,000 psi is required in the weld metal.
E70T-1	88.6 ksi	73 ksi	24 %	A carbon steel electrode with a unique slag system which allows multiple weld beads to be stacked in a horizontal fillet with a minimum of "roll" or convexity. This electrode is intended for single and multiple pass welding in flat and horizontal fillet positions. For use with carbon dioxide gas shielding. An excellent electrode for welding plates such as ASTM A36, A285, A515, and A516.
E70T-4	87.8 ksi	65 ksi	26.5 %	A carbon steel, flux cored electrode for use without external gas shielding in multiple pass welding of carbon steels. This electrode is intended for flat position welding of grooves and fillets and horizontal fillet welding with extremely high deposition rates. Ideally suited for welding applications where gas shielded electrodes may have problems, such as outdoors or in windy conditions.
E71T-1/T-9	89.1 ksi	78.1 ksi	26.3 %	E71T-1/T-9 is intended for single and multiple pass welding of carbon steels. Provides a stable arc, low spatter, easy to remove slag, and neat weld metal. For welding mild steel, and 490MPa grade high-strength steel. Use for ships, machinery fabrication, bridges, structures, steel frames, vessels etc.
71T-1M	89 ksi	78 ksi	26 %	E71T-1M is a flux cored wire that combines excellent performance features with the ability to produce high quality welds. This wire produces fillet welds with little spatter. Cleaning time is reduced because the slag cover is complete and can be easily removed. E71T-1M is designed for welding mild and medium-carbon steels and carbon-manganese medium steels. It can also be used over normal rust and mill scale. This high deposition wire offers excellent operator appeal for general steel fabrications and constructions such as plate sections, beams, girders, truck chassis/bodies, shipbuilding, earth moving equipment, storage tanks, bridge construction etc.
E71T-11	89.4 ksi	66.6 ksi	23.5 %	E7IT-11 is a carbon steel, self-shielding flux cored wire designed for use without external gas shielding, in single or multiple pass welding having a smooth spray-type transfer. A flux cored wire intended for semi-automatic and automatic welding of carbon steel in single pass and limited multiple pass applications. Designed to operate on straight polarity (DCEN) and is well suited for butt, lap, and fillet welds steels from 16 gauge through 1/2". Due to its versatility it is excellent for assembly and maintenance.
E71T-GS	86.4 ksi	N/A	N/A	A carbon steel, self-shielded, flux cored wire that produces smooth arc action, low spatter, full slag coverage, and easy slag removal. Not having to use gas makes this product extremely popular due to it's versatility and portability. This flux cored wire is intended for welding thin-gauge carbon steel. It's the natural choice for applications such as lap and butt welds on galvanized sheet metal, and high speed welds on sheet metal up to 3/16" thick, especially galvanized, aluminized, or other coated steels. The small diameters of this product work very well on the small 110 volt power source/feeders.
E80T1-B2	91 ksi	81.5 ksi	20 %	E80TI-B2 is a low alloy steel electrode for flux cored arc welding using 100% CO2 gas. It is designed for single and multiple pass welding in the flat and horizontal positions of certain chromium-molybdenum steel and pipe grades, where 1-1/4% Cr and 1/2% Mo are required in the weld deposit. E80TI-B2 is an excellent selection to weld steels subject to high-temperature service such as ASTM A387, Gr.11 plate and A335 P11 pipe.
E80T1-Ni1	86.4 ksi	73.7 ksi	27 %	E80TI-Ni1 is a gas-shielded electrode intended for single and multiple pass horizontal fillet and flat position welding of carbon and low alloy steels requiring a minimum tensile strength of 80,000 psi and good CVN toughness (30 ft . lbs. @ -20°F). E80TI-Ni1 is the ideal selection for welding steels combining moderate tensile strength and excellent CVN toughness, such as ASTM A572 Gr60, A302, A575, And A734.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E80T5-B2	94 ksi	82 ksi	25 %	E80T5-B2 is intended for single and multiple pass welding of certain chromium-molybdenum steels, plate and pipe requiring 1 1/4% chrome and 1/2% molybdenum in the weld deposit. The basic slag limits welding to horizontal fillets and the flat position. As with all basic slag electrodes, welder appeal is limited compared to rutile slag electrodes. E80T5-B2 is a good choice for welding steels such as ASTM A387 Gr 11 plate and A335 Gr P11 pipe. These steels are used in high-temperature applications requiring creep resistance. The basic slag imparts better CVN toughness than rutile slag electrodes when welding these steels, which are used in the construction of boilers, heat exchangers and pressure vessels.
E81T1-A1	93.3 ksi	84.6 ksi	23.5 %	E81T1-A1 is a low alloy steel electrode for flux cored arc welding with an external shielding gas. This electrode is intended for single and multiple pass welding, of certain C-Mo steels, where the addition of ½% of molybdenum is required in the deposited weld metal. E81T1-A1 is an ideal choice for welding certain C-Mo steels used in the fabrication of boilers and pressure vessels, such as ASTM A161, A204, and A302 Gr. A plate, and A335-P1 pipe. The ½ % Mo in the weld deposit increases the strength of the weld metal at elevated temperatures, and imparts some corrosion resistance. It does, however, reduce notch toughness somewhat.
E81T1-B2	94.2 ksi	84.2 ksi	20 %	E81T1-B2 is a low alloy steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple pass welding, of certain Cr-Mo steel plate and pipe, where 1½% Cr and ½% Mo are required in the weld deposit. E81T1-B2 is intended to weld steels subject to high-temperature service, such as A387 Gr. 11 plate and A335 P11 pipe. These materials are used in the fabrication of boilers, heat exchangers, and pressure vessels.
E81T1-B2L	92.2 ksi	79.4 ksi	22 %	E81T1-B2L is a single and multiple pass premium low alloy steel electrode able to be welded in all positions of certain 1¼% Cr and ½% Mo steel plate and pipe where low-carbon levels are required in the weld deposit. E81T1-B2L is specially designed to weld thin-walled A335-P11 pipe or tube and well suited for use in the fabrication of pressure vessels, heat exchangers and boilers.
E81T1-B6	89 ksi	79.2 ksi	19.9 %	E81T1-B6 is a low alloy steel electrode intended for single and multiple pass, welding of certain chromium-molybdenum steels where a weld deposit of 5 % chromium and 1/2 % molybdenum is required. This electrode has superb welder appeal and excellent mechanical properties with smooth arc transfer, low spatter, and fast freezing slag. E81T1-B6 is specially formulated for welding tube, pipe and plate subjected to high-temperature service, such as A213-T5 and A335-P5.
E81T1-B8	96.3 ksi	78 ksi	20 %	E81T1-B8 is a flux cored electrode formulated for single and multiple pass welding of 9% chromium and 1% molybdenum steels. E81T1-B8 is used to weld 9Cr-1Mo steels such as A335-P9 piping and A213-T9 tubing. Typical applications involve high-temperature service in the petrochemical and petroleum industries.
E81T1-Ni1	83.5 ksi	76.9 ksi	23.5 %	E8ITI-Nil is a low alloy steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple pass welding, on carbon and low alloy steels requiring good charpy v-notch toughness at subzero temperatures. E8ITI-NII is an ideal selection for welding steels requiring good tensile strength in excess of 80,000 psi and charpy v-notch toughness (20 ft lb <i>f</i>) as low as -40°F. Steels welded with this electrode include ASTM A572, A302, A588, and A734 used in the fabrication of transmission poles, light poles, earth moving and mining machinery, and offshore platforms.
E81T1-Ni2	87 ksi	73 ksi	26 %	E81T1-Ni2 is an excellent selection for welding steels which require good CVN toughness and tensile strength in the range of 80,000-100,000 psi. E81T1-Ni2 is designed for single and multiple pass welding of carbon and certain low alloy steels such as ASTM A572, A575 and A734. E81T1-Ni2 is ideal for applications such as offshore platform construction, shipbuilding, earth moving and mining machinery.
E81T1-W2	91 ksi	81.5 ksi	24 %	E81TI-W2 is a gas-shielded, flux cored, low alloy steel electrode for welding of weathering steels. This electrode is intended for single and multiple pass welding. Welder appeal is excellent with a spray transfer, thin slag which removes easily and cleanly, and a smooth bead profile. E81TI-W2 contains alloy additions which match those of the "weathering" steels such as ASTM A588. This provides weld metal which matches the corrosion resistance and coloring of the weathering-type structural steels commonly used in bridge construction and other structural components used in highway construction.
E91T1-B3	102.1 ksi	87.4 ksi	18 %	E91TI-B3 is specifically formulated for welding materials subjected to high-temperature service using both 100% C02 and 75% Argon- balance C02 gas. E91TI-B3 provides single and multiple pass, all position welding of certain chromium-molybdenum steels. E91TI-B3 is designed for welding materials such as A387 Gr. 22 plate and A335 P22 pipe and leaves 2¼% Cr / 1% Mo weld metal deposit.
E91T1-B9	106.9 ksi	86.1 ksi	19 %	E91TI-B9 is a flux cored electrode containing small additions of niobium, vanadium and nitrogen to improve long term creep properties; designed for single and multiple pass welding of 9% chromium and 1% molybdenum steels. E91TI-B9 is used to weld 9Cr-1Mo creep resistant steels, such as A387 Gr 91 plate; A335 P91 and A369-FP91 piping; A199-T91, A200-T91 and A213-T91 tubing; A182-F91 forgings; as well as fittings and castings of similar composition. Typical applications include power plant turbine casings, valves, headers and piping.
E91T1-K2	103.4 ksi	91.7 ksi	22 %	E91TI-K2 is a gas-shielded, flux cored electrode intended for single and multiple pass welding of certain low alloy steels. It is ideal for weldments requiring 90,000 psi minimum tensile strength and good CVN toughness values. E91TIK2 has a rutile based slag system and excellent subzero CVN toughness and exceptional weld bead geometry with a smooth spray arc transfer with low spatter. E91TIK2 is typically used to weld steels involved in the fabrication of submarines, offshore platforms and leg assemblies, earth moving machinery and specialized structural applications. These steels are usually types such as HY-80, HY-100, ASTM A710, A514 and other similar high-strength steels.
E100T1-K3	105.7 ksi	94 ksi	23 %	E100TI-K3 is a gas-shielded, low alloy steel electrode for flux cored arc welding of certain high-strength low alloy steels. This electrode is intended for single and multiple pass welding in horizontal fillets and the flat position. This electrode exhibits good bead profiles, with excellent slag detachment, providing a smooth spray transfer, full slag coverage, and relatively low spatter levels. E100TI-K3, with a minimum tensile strength of 100 ksi and good CVN toughness levels, is an ideal selection for welding steels such as A514 and HY-80 typically used in fabrications such as heavy crane assemblies, mining machinery, and large earth moving equipment.
E4130-LN	106.9 ksi	98.6 ksi	20.8 %	E4130-LN is a basic flux cored electrode for use with Ar-25% CO2 shielding gas. The deposit contains less than 1% nickel making this electrode suitable for most oil field applications. This electrode is intended for flat and horizontal fillet welding. E4130-LN is designed to weld E4130, and other steels of similar composition, such as E4140 and E8630. It provides a close match to steel properties following post weld heat treatment.
68				

WWW.TECHNIWELDUSA.COM



Mild and Low Alloy Steel Coated Electrode

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E4130	N/A	N/A	N/A	E4130 is used to weld heat-treatable, low alloy SAE E4130 and E8630 steels and steel castings with comparable hardening characteristics. Preheat between 400 - 600°F (204 - 316°C), with the same temperature held at interpass, in order to prevent cracking.
E4140	N/A	N/A	N/A	E4140 is used for welding SAE 4140 and similar heat-treatable steel where the weld metal must match the heat treating properties of the parent metal. Preheat between 400 - 600°F (204 - 316°C), with the same temperature held at interpass, in order to prevent cracking.
E4340	N/A	N/A	N/A	E4340 is used for welding heat treatable, high-strength steels SAE 4130, 4330, 4340 and steel castings with similar hardening properties. Preheat between 400 - 600°F (204 - 316°C), with the same temperature held at interpass, in order to prevent cracking.

Stainless Steel Bare Wire

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ER308/308H	88.5 ksi	59.5 ksi	39 %	ER308/308H is used for TIG, MIG, and submerged arc welding of unstabilized stainless steels such as types 301, 302, 304, 304H, 305, 308, and 308H. This filler metal is the most popular grade among stainless steels. Carbon content in the range of .0408 provides higher strength at elevated temperatures. Used for general purpose applications where corrosion conditions are moderate. Can also be certified as 308H.
ER308/308L	85 ksi	57 ksi	40 %	This classification is the same as ER308/308H, except for the carbon content is held to a maximum of .03%. This increases the resistance to intergranular corrosion without the use of stabilizers such as columbium (niobium) or titanium. Strength of this low-carbon alloy, however, is less than that of the columbium (niobium)-stabilized alloys or type 308H at elevated temperatures. Used to weld base metal of similar composition such as 304L, 321, and 347.
ER308LSi	85 ksi	59 ksi	39 %	This classification is the same as ER308L, except for the higher silicon. This improves the usability of the filler metal in the gas metal arc welding process. If the dilution by the base metal produces a low ferrite or fully austenitic weld, the crack sensitivity of the weld is somewhat higher than that of a lower silicon content weld metal. Used to weld base metal of similar composition such as 301, 302, 304, 304L, 305, 308, 308L and 347.
ER309/309H	85.5 ksi	59.5 ksi	34 %	ER309/309H is used for the welding of similar alloys in wrought or cast form. Used primarily for welding dissimilar materials such as mild steel to stainless steel, as well as for a barrier layer in stainless overlays. For some applications, welding of straight chromium steels can be accomplished with this consumable.
ER309L	85 ksi	58 ksi	36 %	ER309L is of similar composition as ER309 except for the carbon content being lower than .03%. This lower carbon content reduces the possibility of intergranular carbide precipitation. This increases the resistance of intergranular corrosion without the use of stabilizers such as columbium (niobium) or titanium. Strength of this low-carbon alloy; however, may not be as great at elevated temperatures as that of the columbium (niobium)-stabilized alloys or 309. ER309L is preferred over ER309 for cladding over carbon or low alloy steels, as well as for dissimilar joints that undergo heat treatment.
ER309LSi	89.5 ksi	60.5 ksi	35 %	ER309LSi is of the same chemical composition as ER309L, with higher silicon content to improve the bead appearance and increase welding ease. This filler metal is used for welding of similar alloys in wrought or cast form. ER309LSi is mostly used for welding dissimilar materials such as mild steel to stainless steel, as well as for a barrier layer in stainless overlays. The weld beads are exceptionally smooth due to good wetting.
ER309LMo	84.1 ksi	65.25 ksi	28 %	ER309LMo is well suited for austenitic ferritic joints with a maximum application temperature of 572° F. It is also suited for stainless with wet corrosion up to 662° F. ER309LMo is used for the welding of dissimilar materials between stainless and low alloy steels, as well as for overlay cladding and for depositing buffer layers when welding clad products. ER309LMo can be used for joining unalloyed/low-alloy steels/cast steel grades or stainless/heat-resistant chromium steels/cast steel grades to austenitic steels/ cast steel grades.
ER310	89.5 ksi	60.5 ksi	34 %	ER310 is used for the welding of stainless steels of similar composition in wrought or cast form. The weld deposit is fully austenitic and calls for low heat during welding. This filler metal can also be used for dissimilar welding. Used for the welding of stainless steels of similar composition in wrought or cast form. Can also be used for dissimilar welding.
ER312	109.5 ksi	78.5 ksi	25 %	ER312 is designed for welding stainless steels to mild steels as well as high-strength steels. ER312 gives a two-phase weld deposit with substantial percentages of ferrite in an austenite matrix. ER312 is used to weld cast alloys of similar composition and is used to weld dissimilar metals such as carbon steel to stainless steel, particularly those grades high in nickel and weld overlays. When welding similar cast alloys, limit welding to two or three layers only.
ER316/316H	88.5 ksi	59 ksi	35 %	ER316/316H with its presence of molybdenum increases its creep resistance at elevated temperatures & pitting resistance in a halide atmosphere. The lower ferrite level of this nominal composition reduces the rate of corrosion in certain media and is suitable for use at cryogenic temperatures. ER316/316H is used for joining type 316 and similar alloys as well as to weld wrought and cast forms of similar composition.
ER316/316L	86 ksi	58 ksi	36 %	ER316/316L has the same analysis as ER316, except that the carbon content is limited to a maximum of 0.03% in order to reduce the possibility of formation of intergranular carbide precipitation. ER316/316L is primarily used for welding low-carbon molybdenum-bearing austenitic alloys. ER316/316L is not as strong at elevated temperatures as ER316H. Because of the molybdenum, this product has increased creep resistance at elevated temperatures, as well as pitting resistance in marine and industrial environments.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ER316LSi	86.5 ksi	58.5 ksi	36 %	ER316LSi is a general purpose bare wire electrode developed for GMAW and GTAW welding. ER316LSi, which is a higher silicon wire designed to provide a smooth bead appearance and improved wetting action. Higher productivity could be realized in MIG welding. ER316LSi bare wire electrode applications include piping systems, food service equipment, chemical processing plants and pharmaceutical facilities.
ER317L	84.5 ksi	58 ksi	35 %	ER317L was especially developed for welding in severely corrosive environments where crevice and pitting corrosion are of concern. In addition to the resistance to pitting and crevice corrosion, the deposit made with this consumable offers good resistance to intergranular corrosion. ER317L bare wire is particularly well suited for welding in paper industry facilities, food processing plants, chemical processing facilities and in marine environments.
ER320	87.5 ksi	59 ksi	34 %	ER320 is designed to weld base metals of similar compositions for applications where resistance to severe corrosion involving a wide range of chemicals including sulfuric and sulfurous acids and their salts is required. The addition of copper and columbium to the alloy content provides resistance to intergranular corrosion. ER320 can be used for welding wrought and cast alloys of similar composition without post weld heat treatment. Utilized for pipe welding, 320 produces high purity weld deposit and reduces weld metal fissuring while maintaining corrosion resistance.
ER320LR	86.0 ksi	57.5 ksi	35 %	ER320LR has a composition similar to ER320, except that carbon, silicon, phosphorus, and sulfur levels are kept at lower levels as well as the columbium and manganese being specified at a narrower range. The low melting residuals are limited in this alloy to reduce the possibility of microfissuring. It is for this reason that this alloy is often used for welding type 320 stainless steels. ER320LR is primarily utilized for pipe welding. ER320LR is used to weld metals with similar composition in wrought and cast forms.
ER330	84.0 ksi	56.5 ksi	29 %	ER330 is used where heat and scale resisting properties above 1800°F are required. However, high sulfur environments can adversely affect elevated temperature performance. ER330 is used in repairs of defects in alloy castings and wrought alloys of similar composition used in heat treating and furnace industries.
ER347	86.5 ksi	57.0 ksi	35 %	ER347 has columbium added to it's composition as a stabilizer. The addition of columbium reduces the possibility of intergranular chromium carbide precipitation and thus susceptibility to intergranular corrosion. Tantalum and columbium are both good at stabilizing carbon and in providing high-temperature strength. Typical applications include welding, repairing and overlaying of stabilized grades of stainless steel, like type ER347 and type ER321. ER347 is used in the refinery industry to combat high-temperature erosion corrosion and fatigue. ER347 is normally used to weld AISI 321 since titanium will not transfer across the arc.
ER347Si	N/A	N/A	N/A	ER347Si is the same as ER347, except for the higher silicon content. This improves the usability of the filler metal in the gas metal arc welding process. If the dilution by the base metal produces a low ferrite or fully austenitic weld, the crack sensitivity of the weld is somewhat higher than that of a lower silicon content weld metal.
ER385 (904L)	N/A	N/A	N/A	ER385 is used primarily for welding of ASTM B625, B673, B674, and B677 (UNSN08904) materials for the handling of sulfuric acid and many chloride containing media. It may also be used to join type 317L material where improved corrosion resistance in specific media is needed. ER385 may be used for joining UNS N08904 base metals to other grades of stainless steel. The elements C, S, P, and Si are specified at lower maximum levels to minimize weld metal hot cracking, and fissuring (while maintaining corrosion resistance) frequently encountered in fully austenitic weld metals.
ER409Nb	N/A	N/A	N/A	ER409Nb is the same as ER409 except that niobium (columbium)is used instead of titanium to achieve similar results. Oxidation losses across the arc are generally lower. It is used to weld ER409 stainless steel. The greatest usage is for applications where thin stock is fabricated into exhaust system components.
ER409Cb	86.5 ksi	57.0 ksi	35 %	ER409Cb is a ferritic stainless steel welding wire modified with the element of columbium. This improves corrosion resistance, increased strength at high-temperatures, and promotes ferritic microstructure. ER409Cb is a special purpose heat-resisting alloy with excellent weld metal flow and smooth bead appearance designed for MIG welding of exhaust manifolds, catalytic converters in the automotive industry.
ER410	N/A	N/A	N/A	This 12 Cr alloy (wt.%) is an air-hardening steel. Preheat and post heat treatments are required to achieve welds of adequate ductility for many engineering purposes. ER410 is used to welding ER403, ER405, ER410, and ER416 stainless. It is also used for deposition of overlays on carbon steels to resist corrosion, erosion, or abrasion.
ER410NiMo	118.5 ksi	92.0 ksi	20 %	ER410NiMo bare welding wire is a martensitic stainless steel. Normally the chromium is kept low and the nickel high to avoid ferrite formation in the weld metal. Preheating and interpass temperature of not less than 300°F are required. Post-weld heat treatment should not exceed 1150°F, as higher temperatures may result in hardening. Typical applications include welding, repairing and overlaying of type ER410 and ER410NiMo castings and wrought materials. Used in the hydropower industry to combat erosion corrosion. Normally ER410NiMo has better weldability than ER410 due to it's low-carbon content.
ER420	145 ksi	120 ksi	45 %	ER420 is a martensitic stainless steel with properties similar to ER410 except slightly higher chromium and carbon contents. It requires preheat and interpass temperatures of not less than 400°F, followed by slow cooling. ER420 is used for many surfacing applications that call for superior resistance to abrasion due to it's higher hardness and increased wear resistance over the weld metal of 410.
ER430	77.5 ksi	59.0 ksi	25 %	ER430 is a ferritic stainless steel which offers good ductility in heat-treated condition. This carefully balanced composition provides outstanding resistance at temperatures up to 1600°F. Preheating of the joint to a minimum of 300°F is recommended before welding. In addition to the applications of welding similar alloys, it is also used for overlays and thermal spraying.
ER630	150 ksi	135 ksi	10 %	ER630 is a precipitation hardening, martensitic stainless steel used for welding of materials of similar chemical composition. Mechanical properties of this alloy are greatly influenced by the heat treatment. Typical applications include valves, fasteners, gears, propeller shafts, and roller chain pins.
ER2209	150 ksi	135 ksi	10 %	ER2209 bare welding wire is used to weld standard duplex stainless steels such as 31803. The weld metal posses a high tensile & yield strength along with moderate ductability. This grade has very good resistance to stress corrosion cracking & pitting corrosion with a typical pitting resistance equivalent number of 32-36. Used for pipe work and general fabrication in the offshore oil, gas and chemical process industries. Alloy offers high-strength with good ductility and excellent corrosion resistance.

TECHNIWELDUSA FILLER METALS

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ER2553	128.4 ksi	98.6 ksi	26 %	ER2553 is a super duplex alloy with austenite distributed within a ferrite matrix. Good general corrosion resistance to a variety of media, with a high level of resistance to chloride pitting and stress-corrosion cracking. Useful service limited to 500°F (260°C) maximum. ER2553 is used primarily to weld duplex stainless steels which contain approximately 25 percent chromium.
ER2594	128.4 ksi	98.6 ksi	26 %	Superduplex grade ER2594 electrodes provide matching chemistry and mechanical property characteristics to wrought superduplex alloys such as ER2507 and Zeron 100 as well as superduplex casting alloys (ASTM A890). The welding wire is overalloyed 2 - 3 percent in Nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile/yield strength and superior resistance to SCC and pitting corrosion.

Stainless Steel Coated Electrodes

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E2209-16	115.0 ksi	90.0 ksi	27 %	E2209-16 combines high-strength with improved pitting and SCC resistance. It has a smooth running arc that results in a uniform bead that is flat to slightly convex. E2209-16 is specially formulated for welding 22 Cr-5 Ni-3 Mo (type 2205) duplex stainless steels.
E308/308H-16	86.0 ksi	65.0 ksi	41 %	E308/308H-16 coated electrodes are used for welding unstabilized 18-8 stainless steels such as types 301, 302, 302B, 303, 308Se 304, 305, and 308. The 308 electrodes provide corrosion resistance and physical properties equal to or greater than the steels for which they are recommended. Weld deposits, when ground and finished, cannot be distinguished from the base metal. Typical applications include dairy, distillery, restaurant equipment, and chemical and refining industry equipment. -15 coatings available upon request .
E308/308L-16	83.0 ksi	64.0 ksi	42 %	E308L/308L-16 is a low-carbon content electrode. The weld deposit contains a maximum of 0.04% carbon, which minimizes the formation of chromium carbides, and consequent susceptibility to intergranular corrosion. The weld deposit, with controlled ferrite, gives excellent notch toughness at -320°F (-196°C). It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E308L/308L-16 is primarily designed for welding type 308L base metal with low or medium carbon content. Excellent for welding 18Cr-8Ni steels. -15 and -17 coatings available upon request.
E309/309H-16	88.0 ksi	67.0 ksi	37 %	E309/309H-16 is an all position electrode. It yields a uniform weld bead that is flat to slightly convex. E309/309H-16 is primarily designed for welding type 309 metal but can also be used for 18-8 clad steels or dissimilar materials if the alloy content is sufficiently high for a sound, ductile deposit15 coatings available upon request.
E309Cb-16	88.0 ksi	67.0 ksi	37 %	E309Cb-16 is an electrode designed to run on direct current, reversed polarity as well as alternating current. The weld deposit of this electrode is similar to that of E309L-16, with the addition of columbium, which stabilizes the alloy against intergranular corrosion. This electrode is used for joining type 347 steels and for welding 347 type steels to low or non-alloyed steels. It is also suitable for overlay welding where a Cb-stabilized weld deposit is desired.
E309L-16	79.0 ksi	64.0 ksi	38 %	E309L-16 has a low-carbon content (0.04% maximum) for reduced susceptibility to sensitization during high-temperature service. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E309L-16 outstanding for welding dissimilar metals such as weld overlay or for type 309 stainless steel to low alloy steels. Primarily designed for welding type 309 metal but can also be used for 18-8 clad steels. -15 and -17 coatings available upon request.
E309Nb-16	79.0 ksi	64.0 ksi	38 %	E309Nb-16 has the same composition of weld metal deposited by E309-16, except for the addition of columbium (niobium) and a reduction in the carbon limit. The columbium (niobium) provides resistance to carbide precipitation and thus increases intergranular corrosion resistance and also provides higher strength in elevated temperature service. E309Nb-16 electrodes are used also for welding type 347 clad steels or for the overlay of carbon steel. E309Nb-XX was formerly named E309Cb-XX. The change was made conform to the worldwide uniform designation of the element nobium.
E309Mo-16	80 ksi	79.7 ksi	30 %	E309Mo-16 has the same composition of weld metal deposited by E309-16, except for the addition of molybdenum and a small reduction in the carbon limit. It is used for welding type 316 clad steels or for the overlay of carbon steels.
E309MoL-16	80 ksi	79.7 ksi	30 %	E309MoL-16 is an all position electrode designed for applications requiring molybdenum with a standard 309L analysis. E309MoL-16 is used primarily for welding type 316 and 316L clad steels, or welding Mo containing austenitic stainless steel to carbon steel, provided the service temperature is less than 600°F.
E310-16	86.0 ksi	63.0 ksi	40 %	E310-16 is considered a general purpose electrode used mainly for welding AISI 310 stainless steel but also for straight chromium stainless as well as almost any analysis of carbon and alloy steel. The weld deposit is fully austenitic, and as such calls for minimum heat input during welding. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E310-16 is ideal for welding and building up parts for heat treatment and case hardening furnaces, cement kilns and other burners subject to high-temperature and oxidation in a non-sulphorous atmosphere.
E310Mo-16	78.0 ksi	91.0 ksi	12 %	E310Mo-16 is an electrode designed to run on direct current, reversed polarity as well as alternating current. E310Mo-16 electrodes are intended for the welding of type 316 clad steels. Other grades of molybdenum-bearing stainless steel may also be successfully welded with this type. This electrode is also used for relining digesters in the paper industry.
E312-16	115.0 ksi	95.0 ksi	25 %	E312-16 is one of the most widely used stainless steel electrodes for arc welding. It offers outstanding performance with a directional arc and self-detaching slag. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E312-16 electrodes are used for welding wrought and cast alloys of similar composition as well as for welding of dissimilar joints of type 312 metals. The weld deposits exhibit high tensile strength and offer fair resistance to abrasion making it ideal for new fabrication or repair maintenance applications.
E316/316H-16	85.0 ksi	68.0 ksi	42 %	E316/316H-16 is a fully alloyed core wire, featuring a rutile basic coating, that produces weld deposits with smooth bead appearance and easy slag removal. It can be used in any position, however it is best suited for flat and horizontal fillet welding. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E316/316H-16 electrodes are excellent for welding type 316 steel. Most commonly used in industries which use acid, gas, water and steam in manufacturing, requiring increased corrosion resistance of molybdenum bearing steels. Also used as a build-up on sealing faces of valves and fittings.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E316/316L-16	82.0 ksi	61.0 ksi	42 %	E316/316L-16 electrodes are similar to E316/316H-16, except the carbon is limited to a maximum of 0.04%, to reduce the possibility of carbide precipitation and consequent intergranular corrosion. Precise control of the carbon content in E316/316L electrodes provides a weld deposit matching the corrosion resistant qualities of type 316/316L stainless steel. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. E316/316L-16 is excellent for welding stainless steel types 316, 316L and 318. The welds corrosion and fissuring resistance make it an excellent choice for critical applications requiring reduced susceptibility to sensitization during welding. -15 coatings available upon request.
E317L-16	92.0 ksi	69.0 ksi	35 %	E317L-16 with its increased molybdenum content results in higher tensile strength and improved corrosion resistance, as well as greater high-temperature creep strength than 316L-type electrodes. It is also highly resistant to moisture pick-up. It has a smooth running arc that results in a uniform bead that is flat to slightly convex. E317L-16 electrodes are used mainly for the welding of 18% Cr – 12% Ni – 3% Mo stainless steels. This electrode is typically used where strong corrosion resistance against sulfuric or sulfurous acids is required such as in the chemical, paper and textile industries.
E320-16	86.0 ksi	59.0 ksi	33 %	E320-16 electrodes are designed for welding alloys of similar composition in wrought and cast forms, with exceptional corrosion resistance to a wide range of chemical environments. With carbon, silicon, phosphorus and sulfur controlled to lower limits, and columbium and manganese kept to a narrow range, this composition is designed to reduce the possibility of microfissuring. Low heat input, however, is advisable for welding. E320-16 will produce weld deposits which resist corrosion, pitting, and cracking from sulfuric acid, phosphoric acid, and other chemicals.
E320LR-16	85.0 ksi	57.0 ksi	34 %	E320LR-16 flux-coated electrodes are a modified version of 320 electrodes, where the "residuals" carbon, silicon, phosphorus and sulfur are specified at lower maximum levels. Columbium and manganese are also maintained within tighter parameters. These strict controls eliminate hot cracking and microfissuring frequently encountered in austenitic stainless steel. E320LR-16 is designed for welding on alloy 20 and alloy 20 Cb-3" or alloys of similar composition in wrought or cast forms.
E330-16	84.5 ksi	57.0 ksi	26.5 %	E330-16 electrodes have a high nickel content which gives the weld deposit a strong adherent surface oxide that resists scaling at elevated temperature above 1800°F. High sulfur environments adversely affect the high-temperature performance. Heat input has to be kept to a minimum during welding to avoid the possibility of microfissuring. E330-16 electrodes are used primarily for repairing defects in wrought and cast forms of stainless steels of similar chemical composition.
E347-16	95.0 ksi	63.0 ksi	36 %	E347-16 columbium stabilized stainless steel electrodes. The columbium content is approximately ten times the carbon content, which reduces the possibility of intergranular carbide precipitation. E347-16 produces weld deposits with smooth bead appearance and easy slag removal. E347-16 used for the welding of types 302, 304, 321, and 347 stainless and stainless clad steels. Due to the strengthening effect of columbium, this grade is recommended if the weld metal is to be subjected to high-temperatures above 700°F.
E385-16	75 ksi	75.4 ksi	30 %	E385-16 is used primarily for welding type 904L materials for the handling of sulphuric acid and many chloride-containing media. E385-16 also may be used to join type 317L material where improved corrosion resistance in specific media is needed. It can also be used for joining type 904L base metal to other grades of stainless. The elements C, Si, P and S are specified at lower maximum levels to minimize weld metal hot cracking and fissuring (while maintaining corrosion resistance) frequently encountered in fully austenitic weld metals.
E410-16	92.5 ksi	78.0 ksi	21 %	E410-16 electrodes are used for welding 410 straight chromium steels where good strength and ductility, as well as corrosion and oxidation resistance at temperatures as high as 1500°F is a requirement. This material, being an air-hardening type, calls for a preheat and interpass temperature of not less than 400°F (200°C) during welding. E410-16 is also used for welding AISI 403, 405, 414, 416 and 420 stainless steels, for overlaying carbon steels to provide corrosion, erosion and abrasion resistance, and as a build-up on sealing faces of gas, water and steam fittings which are made from unalloyed or low-alloyed steels.
E410NiMo-16	134.0 ksi	123.0 ksi	18 %	E410NiMo-16 electrodes are similar to 410 electrodes but contain molybdenum and a higher nickel content for improved corrosion resistance at elevated temperatures. Preheat and interpass temperatures of not less than 300°F are recommended during welding. Post-weld heat treatment should not exceed 1150°F, as higher temperatures may result in hardening. E410NiMo electrodes are used to weld materials of similar chemical composition in cast and wrought forms. Also used for repair welding of large 410 castings as well as light gauge 405, 410 and 410S stainless steels.
E430-16	74 ksi	58.8 ksi	23 %	E430-16 electrodes should be welded with a 300-450°F preheat and interpass temperature with a post weld heat treatment of 1450-1550°F for four hours; furnace cooled to 1100°F and then either air cooled or water quenched. Heavy sections may require forced cooling or spray quenching through the temperature range from 1050 to 750°F to avoid 885°F embrittlement. E430-16 electrodes are used to weld steels of similar composition for such uses as automobile body moldings and bright trim applications.
E630-16 (17-4 PH)	150.0 ksi	133.8 ksi	10 %	E630-16 weld deposits have excellent mechanical properties with high-strength and hardness. Depending on the weld dimensions and applications, E630-16 can be used in the as-welded condition or in the heat treated condition, or welded plus solution treated plus precipitation hardened condition to obtain higher strength. This electrode offers the combined characteristics of a strong, corrosion resistant, easily machinable weld metal. E630-16 is most commonly used in high-temperature and abrasion resistant environments such as those found in the petrochemical and aerospace industries. Also used to weld ASTM A-564 (17CR-4Ni) and (17CR-7Ni) base metal, and precipitation hardenable steel.
E2553-16	110 ksi	- ksi	15 %	E2553-16's weld metal deposit has a "duplex" microstructure consisting of an austenite-ferrite matrix. This " duplex" weld deposit combines increased tensile strength with improved resistance to pitting, corrosive attack and to stress corrosion cracking. E2553-16 electrode's are used to weld Ferralium [®] 255 and duplex stainless steels, which contain approximately 25 % chromium.
E2594-16	130 ksi	101 ksi	31 %	Superduplex grade 2594 electrodes provide matching chemistry and mechanical property characteristics to wrought superduplex alloys such as 2507 and Zeron 100 as well as superduplex casting alloys (ASTM A890). The welding wire is overalloyed 2 - 3% in Nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile/yield strength and superior resistance to SCC and pitting corrosion.


Stainless Steel Flux Cored Wire

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E308LT0-1/4 & E308LT1-1/4	83.0 ksi 83.0 ksi	60.0 ksi 60.0 ksi	38 % 38 %	E308L-TI is a gas-shielded, flux cored, stainless steel electrode with a nominal weld metal composition of 20% chromium, 10% nickel and a maximum carbon content of 0.04%. The low-carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. E308L-TI is used to weld 301, 302, 304L, 308 and 308L stainless steel. Also widely used to weld components for the chemical, paper, textile and pharmaceutical industries. Types 321 and 347 may also be welded as long as the service temperature does not exceed 500°F.
E308L-MC Metal Cored	82.6 ksi	57.0 ksi	38 %	E308L-MC is a gas-shielded, metal cored, stainless steel electrode with a weld metal composition of 19.5-22% Chromium, 9-11% Nickel and a maximum of 0.03% carbon. The low-carbon minimizes carbide precipitation and makes it more resistant to intergranular corrosion. 308L-MC produces little or no slag and virtually no spatter, minimizing cleanup. E308L-MC can be used to weld the same grades of stainless steel as 308-MC; in addition, it can be used to weld types 321 and 347 when the service temperature does not exceed 500°F. Designed for use with Ar/1-2% 02 or Ar/1-2% C02 shielding gases.
E308HT1-1/4	86.8 ksi	65.4 ksi	44 %	E308HT-1 has a minimum carbon content allowed of 0.04%. E308HT-1 was developed for out-of position welding. This flux cored wire will deposit out-of position welds at substantially higher welding currents than other stainless steel flux cored wires, resulting in a higher deposition rate. The slag is self-peeling and minimizes cleanup. E308HT-1 was formulated for use with 75% Argon/25% C0 ² shielding gas, with virtually no spatter and slightly higher yield and tensile strength than C0 ² , however straight C0 ² may also be used. Mechanical properties and deposit analysis will meet AWS 5.22 specifications with either gas. E308HT-1 is used for welding types 304H and 347H stainless when high-temperature service is required.
309L-T1	85.1 ksi	66.9 ksi	38 %	309L-TI is a gas-shielded, flux cored, stainless steel electrode for use in all position welding. The maximum carbon content of 0.04% minimizes carbide precipitation and makes the weld metal more resistant to intergranular corrosion. 309L-TI is utilized in welding refinery and chemical processing equipment as well as furnace and auto exhaust parts. It welds type 309 stainless steel, joins carbon and low alloy steels and welds 304 clad sheets as well as the first layer cladding of carbon steel.
E309LT0-1/4 & E309LT1-1/4	85.5 ksi 86 ksi	62.6 ksi 61.7 ksi	37 % 38 %	E309LT0-1/4 & E309LT1-1/4 are designed for MAG welding of 22% Cr - 12% Ni steel and heat resistant & dissimilar joint such as a stainless steel to carbon steel of low alloy steel. Under layer welding on clad side groove claded stainless steel or carbon steel where stainless steel weld metal is overlayed. • E309LT0-1/-4 is titania type of flux cored wire for flat & horizontal position welding. • E309LT1-1/-4 is titania type of flux cored wire for all position welding. • Recommended shielding gas - 100% C02 Gas or 80% Ar + 20% C02 gas. E309LT series wires provide stable arc, easier slag removal, less spatter & welding fume than solid wires. The weld metal with optimum ferrite contents in its austenitic structures provides excellent weldability and lower crack susceptibility.
E309L-MC Metal Cored	84.0 ksi	64.2 ksi	35 %	E309L-MC is a gas-shielded, metal cored, stainless steel electrode with a maximum carbon content of 0.03%. The low-carbon minimizes carbide precipitation and makes it more resistant to intergranular corrosion. 309L-MC has a smooth, spray arc transfer and produces little or no slag with virtually no spatter. E309L-MC is used to weld 304 to carbon steel, welding the clad side of 304 clad steels, and welding stainless steel sheet linings to carbon steel shells. It is used for metal cored arc welding with argon/carbon dioxide or argon/oxygen gas blends.
E309LMoT1-1/-4	98.6 ksi	81.2 ksi	33 %	 E309LMoTI-1/-4 is a titania type of flux cored wire for all-position welding. This product is designed for MAG welding of low-carbon 22% Cr ~12% Ni-Mo stainless steels. Dissimilar joint welds ; of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr- and austenitic Cr-Ni steels, manganese steels. Cladding ; for the first layer of corrosion resistant weld claddings on ferritic-pearlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N. Recommended shielding gas - 100% C02 Gas only. Weld metals contain comparatively much more ferrite in their austenitic, therefore they provide better weldability together with superior heat resistance, and corrosion resistance for Mo-alloyed claddings the product is necessary for the 1st layer.
E316L-M Metal Cored	82.9 ksi	63.1 ksi	37 %	E316L-MC is a gas-shielded, metal cored, stainless steel electrode. This electrodes composition includes 18-22% chromium, 11-14% nickel, 2-3% molybdenum and a maximum of 0.03% carbon. This combination provides a weld metal with increased creep resistance and improves resistance to pitting, carbide precipitation and intergranular corrosion. E316L-MC is designed for use with Ar/1-2% 02 or Ar/1-2% C02 gases. It is utilized in the pulp and paper industry, chemical and textile processing equipment, furnace parts and in parts exposed to marine environments and.
E316LT0-1/4 & E316LT1-1/4	83.3 ksi 83.8 ksi	61.6 ksi 61.2 ksi	42 % 42 %	E316LT0-1/4 & E316LT1-1/4 are designed for welding of low-carbon 18%Cr ~12%Ni ~ 2% Mo stainless steel. Under layer welding on clad side groove claded stainless steel or carbon steel where stainless steel weld metal is overlayed. • E316LT0-1/-4 is titania type of flux cored wire for flat & horizontal position welding. • E316LT1-1/-4 is titania type of flux cored wire for all-position welding. • Recommended shielding gas - 100% C02 Gas or 80% Ar + 20% C02 gas. 316LT series wires provide excellent usability with stable arc, less spattering, good bead appearance, better slag removal, and less quantity of welding fume comparable to solid wire. Excellent weldability and increased creep resistance at elevated temperature.
E317LT1-1/4	91.7 ksi	68.8 ksi	34 %	E317LTI-1/4 is recommended for welding type 317 and 317L stainless steel to give a maximum of 0.04% Carbon in the weld deposit. The higher molybdenum content, as compared to type 316L, further reduces susceptibility to pitting corrosion. It was developed for out-of-position welding at substantially higher welding currents than other stainless steel flux cored wires, resulting in a higher deposition rate. The slag is self-peeling and minimizes cleanup. E317LTI-1/4 was formulated for use with 75% Argon/25% C0 ² shielding gas to produce a smooth arc with virtually no spatter and slightly higher yield and tensile strengths than C0 ² , however, straight C0 ² may also be used. The mechanical properties and deposit analysis will meet AWS 5.22 specifications with either gas. 317L-T1 This flux cored wire is used in the pulp and paper industry and in other severe corrosion applications involving sulfuric and sulfurous acids and their salts.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
E347T1-1/4	94.0 ksi	63.0 ksi	35 %	E347TI-1/4 is a gas-shielded, flux cored, all position stainless steel electrode with a nominal weld metal composition of 19.5% chromium, 10% nickel and 0.5% columbium (niobium). The columbium forms a stable carbide which reduces chromium carbide precipitation and makes weld metal more resistant to intergranular corrosion. E347TI-1/4 is used with 100% CO2 or a blend of 75-80% Ar/balance CO2. It is utilized in the welding of furnace parts, high-pressure steam piping parts, pressure vessels, chemical tanks and automotive parts. It is also used to weld 321, 347 and 348 stainless steels.
E409-MC Metal Cored	67.0 ksi	50.5 ksi	26 % E409-MC is a composite metal cored, stainless steel electrode for gas-shielded arc welding. Arc transfer is a s virtually no spatter emission. This electrode is stabilized with both niobium (columbium) and titanium. E409-N welding ferritic stainless steel sheet and thin gauge material, such as those in exhaust systems for trucks Designed for use with Ar/1-2% 02 shielding gas.	
E409Nb	67.0 ksi	50.5 ksi	26 %	E409Nb is a composite metal cored, stainless steel electrode for gas-shielded arc welding. Arc transfer is a smooth spray with minimal spatter; bead appearance is smooth and clean. E409Nb produces a ferritic stainless steel deposit which is ideal for welding thin gauge ferritic stainless in the fabrication of automotive exhaust systems. Typically, these components are manifolds, mufflers, catalytic converters and tubing. The tubular wire characteristics provide better performance on gaps and poor fit up than solid wires.
E2209T1-1/4	121.0 ksi	98.0 ksi	24 %	E2209TI-1/4 is a flux cored, all position electrode designed to weld duplex stainless steels of the 22Cr-9Ni-2Mo-N type. The weld deposit has a "duplex"microstructure of austenite and ferrite and normally gives ferrite in the range of 30-60 FN. E2209TI-1/4 provides excellent notch toughness of 35 ft per pound at -20°F and is designed for use with 100% C02 or 75-80% Ar/balance C02 shielding gas. E2209TI-1/4 is used to weld similar materials in the chemical and fertilizer industry, off-shore pipelines, sour gas lines, etc.

Aluminum Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application	
1100 Welding Wire	13-24 ksi	5-22 ksi	5-35 %	1100 is a 99% aluminum wire that is highly resistant to chemical attack and weathering. It is recommended for welding 1100 and 3003 aluminum sheets, plates and shapes. It is popular in the fields of construction, decoration, metallurgical, pipelines, spinning apparatus.	
4043 Welding Wire	20-34 ksi	10-28 ksi	4 - 12 %	4043 is a 5% silicon aluminum filler metal recommended for welding 2014, 3003, 3004, 5052, 6061, and 6101 (in various conditions of heat treatment and 6063 sheets, plates and shapes). (Can Not Be Anodized). Construction of frames, heavy sheet metal, and machine bases. 4043 can also be used for welding castings. 4043 is designed for welding 6xxx series aluminum alloys. It may also be used to weld 2xxx and 3xxx series alloys.	
ER4047 Aluminum Brazing Rod	20-34 ksi	10-28 ksi	4 - 12 %	ER4047 is a 12% silicon aluminum brazing rod that is recommended for torch brazing and dip or furnace brazing of 1060, 1350, 3003, 5005, 6061, 6063, and 7005. ER4047 produces very clean weld deposits and provides excellent operator appeal. A lower melting point and higher fluidity are two advantages 4047 has over its cousin 4043.	
ER5183 Welding Wire	40 - 45 ksi	18-26 ksi	12-16 %	ER5183 is designed to weld high magnesium alloys to meet higher tensile strength requirements. It is used to weld 5083, 6061, 6063, 5086, 7005 and 7039 alloys, for structural applications in marine and cryogenic industries and structural applications where high-strength, high fracture toughness for impact resistance, and exposure to corrosive elements are important.	
ER5356 Welding Wire	27-46 ksi	12-30 ksi	10-17 %	ER5356 is a great general purpose filler alloy designed for the welding of 5XXX series alloys when 40,000 psi (276 MPa) tensile strength is not required. ER5356 is a 5% Magnesium aluminum that offers corrosion resistance when exposed to salt water. It is used to weld 5050, 5052, 5083, 5356, 5454, and 5456 base metal.	
ER5554 Welding Wire	35 ksi	16 ksi	17 %	ER5554 is intended as a matching filler alloy when welding 5454 base alloys. This combination of alloys does not become sensitive to stress corrosion cracking at elevated temperatures and is used in those applications that may be subjected to temperatures in excess of 150°F. ER5554 is widely used in the manufacture of chemical storage tanks, automotive wheels, over-the-road trailers, and rail tank cars.	
ER5556 Welding Wire	45 ksi	23 ksi	14 %	ER5556 offers an excellent combination of corrosion resistance, strength, toughness, workability, and weldability. It is recommended for welding 5083, 5086, 5154, 5254 and 5456 high tensile aluminum alloys.	
1300 Arc Welding Electrode	34 ksi	20 ksi	18 %	1300 is an all position 5% silicon aluminum arc welding electrode with exclusive self-lifting slag. It is used for low temperature production and maintenance welding of cast and wrought aluminum sheets, plates, castings and extrusions. 1300 is widely used for tanks, pipes, appliances, refrigeration equipment, irrigation equipment, automobile parts and parts found in the chemical, food, and laundry industries.	

Brazing Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
Silvaloy O	N/A	N/A	N/A	Silvaloy 0 is extremely fluid at brazing temperatures and will penetrate joints with very little clearance. Best results are obtained with clearances of .001003". Melting of Silvaloy 0 is virtually complete at 1350°F. Best results are obtained when brazing slightly above this temperature. The phosphorus content of Silvaloy 0 acts as a fluxing agent and no flux is necessary when brazing copper-to-copper joints. However, when used with a copper alloy or one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding, and flow throughout the joint. Silvaloy 0 is primarily used for the joining of copper-to-copper on vibration free joints. It is very effective for joining tight fitting copper pipe and tubing, and is also used for the brazing of copper-to-copper alloys, brass-to-bronze.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
Silvaloy 5	N/A	N/A	N/A	Silvaloy 5 has good flow and wetting properties on copper, brass, and bronze. The flow point of is 1325°F. Used when gap clearance range is .003" to .006" ideal for larger copper pipe sizes. Silvaloy 5's melting characteristics are such that on the low end of its brazing temperature range it has "sluggish" flow characteristics which enable it to fill gaps better, making it ideal for loose-fitting joints and at the high end of its brazing temperature range, it is very fluid, making it ideal for tight-fitting joints requiring deep penetration. The phosphorous content of Silvaloy 5 acts as a fluxing agent and no flux is necessary when brazing copper-to-copper joints. However, when used with one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding, and flow throughout the joint.
Silvaloy 6F	N/A	N/A	N/A	Silvaloy 6F has been universally accepted by repair and installation contractors because of its moderate flow with good filleting and gap filling characteristic when the joint fit up dimensions are less than ideal. The phosphorous content of Silvaloy 6F acts as a fluxing agent and no flux is necessary when brazing copper-to-copper joints. However, when used with one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding, and flow throughout the joint. Silvaloy 6F is used for the brazing of copper and copper alloys, brass, and bronze. It should not be used on ferrous metals or alloys containing more than 10% nickel due to the formation of brittle intermetallic phosphide compounds.
Silvaloy 15	N/A	N/A	N/A	Silvaloy 15 has more ductility and better electrical conductivity than the lower silver content phos-coppers. It has good flow and wetting properties on copper, brass and bronze. The phosphorus content acts as a fluxing agent and no flux is necessary when brazing copper to copper joints. However, when used with a copper alloy or one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding and flow throughout the joint. Silvaloy 15 has the most "sluggish" flow characteristics, of the phos-copper filler metals. This enables it to fill gaps better. Melting of Silvaloy 15 is virtually complete at 1300°F even though the liquid is not yet reached. Best results are obtained when brazing slightly above this temperature. Silvaloy 15 is used for the brazing of copper and copper alloys, brass and bronze. It is very effective for joining pipe and tubing and is widely used for electrical work.
Silvaloy 50	N/A	N/A	N/A	Silvaloy 50 is one of the lower melting brazing alloys composed of silver, copper, zinc and cadmium. It has wide acceptance by industrial users, as well as being included in Federal and Military specifications on brazing filler metals or alloys. It has a narrow melting range which is not apparent in most brazing operations, making it flow freely through a capillary. Silvaloy 50's typical applications are the joining of ferrous, nonferrous and dissimilar metals and alloys with close joint clearances. It is suitable for use on most metals except aluminum and magnesium. It is mainly used for joining steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. Similar to Silvaloy 45 properties with narrowr melt range, used on same base metals.
Silvaloy 45	N/A	N/A	N/A	Silvaloy 45 is the lowest melting brazing alloy available composed of silver, copper, zinc and cadmium. It is suitable for use on most metals except aluminum and magnesium. It is used for joining steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. It has wide acceptance by industrial users, as well as being included in Federal and military specifications on brazing filler metals or alloys. It has a narrow melting range which is not apparent in most brazing operations, making it flow freely through a capillary. Silvaloy 45's typical applications are the joining of ferrous, nonferrous and dissimilar metals. Silvaloy 45 should be used for close joint clearances (0.000-0.003in).
Silvaloy 50N	N/A	N/A	N/A	Silvaloy 50N is a modification of Silvaloy [®] 50. It was originally introduced because of somewhat better corrosion resistance than Silvaloy 50 for certain conditions, and is still used for such purposes. When melting, Silvaloy 50N passes from the solid state to a mushy or plastic range and progressively to a liquid. The largest portion of Silvaloy 50N melts in the upper section of its temperature range. Therefore, the alloy has a good body while in the plastic range and is suitable for building fillets or bridging large gaps. Late melting of the major portion of the alloy also helps minimize any separation of the solid and liquid portions by liquation during melting. It has proven successful on many marine applications and for dairy equipment which must withstand strong cleaning solutions. The 3% nickel content of this alloy also improves its wetting of stainless steel and tungsten, or molybdenum carbide tool tips. Silvaloy 50N the largest use of this solder is for attaching carbide cutting tips to tool shanks.
Silvaloy A-45	N/A	N/A	N/A	Silvaloy A-45 is a good general purpose alloy often used when cadmium must be avoided such as in the dairy and food industries. Silvaloy A-45's typical applications are the joining of ferrous, nonferrous and dissimilar metals. It is used for brazing in the electrical industry and for brazing brass parts such as ships, piping, band instruments and lamps. Excellent replacement to cadmium containing alloys. Broad application in furnace brazing.

Bronze Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application	
1400 Phos-Bronze	50 ksi	N/A	18 %	1400 is an all position Phos-Bronze electrode used for joining copper base alloys to themselves and to stainless steels and cast irons. It provides a good color match on bronze and will work harden. Weld deposits are ductile, strong, and machinable. It offers corrosion resistance to salt water and chemicals. Used for overlays on pumps, shafts, impellers and propeller blades, and for building up bearing journals and frictional wear surfaces on heavier sections, galvanized iron, and ornamental iron.	
Aluminum Bronze A2 Coated	77 ksi	35 ksi	27 %	A2 is very versatile for joining aluminum bronze of similar composition, silicon and manganese bronze, high-strength copper-zinc alloys, some copper-nickel alloys, ferrous metals and dissimilar metals. Dissimilar applications include aluminum bronze to steel and copper to steel. It is also used for building up or overlaying metal for wear and corrosion resistant surfaces. Used for marine maintenance and repair welding of ship propellers, pump housings, rigging jacks, piston heads, bearings and many overlay or surfacing applications.	
Deoxidized Copper	29 ksi	8 ksi	29 %	Deoxidized Copper provides dense, high quality deposits with relatively high electrical conductivity for use in joining and overla with inert gas processes. Used to fabricate deoxidized copper, repair weld copper castings, to weld galvanized steel and deoxidize copper to mild steel where high-strength joints are not required. Used for billet molds, conductor rolls, heater elements, copper sculptures, bus bars, copper connectors, and steel mill electrode holders.	

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application	
Silicon Bronze	50 ksi	N/A	65 %	Silicon Bronze is a copper based filler metal that contains 3% silicon and trace amounts of manganese, tin and zinc. The oxyacetylene gas flame should be slightly oxidizing. Keep the weld puddle small in order to promote fast solidification and minimize cracking. A high boric acid flux should be used both before and during welding. Preheat is NOT recommended. Used primarily for oxyacetylene welding of copper, copper-silicon and copper-zinc metals to themselves and to steel. It is excellent for plain or galvanized steel sheet metal as well as other coated steels, and surfacing areas that are subjected to corrosion.	
Aluminum Bronze A1	68 ksi	28 ksi	47 %	A1 is an iron free alloy used primarily to overlay bearings and wear-resistant surfaces that require a 125 BHN hardness and to resist corrosion, especially from salt water, metal salts and acids in varying concentrations and temperatures. It is not recommended for joining since the deposit has a tendency to be hot short. For welding tube sheets, valve seats, pickling hooks, impellers, in chemical plants, and pulp mills.	
Aluminum Bronze A2	60 ksi	N/A	N/A	Aluminum Bronze A2 is an iron-bearing aluminum bronze and is generally used for joining aluminum bronzes of similar composition, manganese, silicon bronzes, some copper-nickel alloys, ferrous metals and dissimilar metals. The most common dissimilar metal combinations are aluminum bronze to steel and copper to steel. It is used to provide wear- and corrosion-resistant surfaces.	
40	75 ksi	N/A	N/A	40 manganese-nickel-aluminum bronze filler metal used for joining and repairing of cast or wrought base metals of similar composition. This filler metal may also be used for surfacing applications where high resistance to corrosion, erosion, or cavitation is required.	
46	72 ksi	N/A	N/A	46 nickel-aluminum bronze is used for joining and repairing of cast or wrought nickel-aluminum bronze base metals.	
Phos-Bronze A	35 ksi	N/A	N/A	Phosphorous Bronze A contains about 5 % tin and up to 0.35 % phosphorous added as a deoxidizer. Tin increases wear resistance of the weld metal and slows the rate of solidification by broadening the temperature differential between the liquids and solids. This slower solidification increases the tendency to hot shortness. To minimize this effect, the weld pool should be kept small and welding time as short as possible. Phosphorous Bronze A can be used to weld bronze and brass. It also can be used to weld copper if the presence of tin in the weld is not objectionable.	
Low Fuming Bronze	63 ksi	N/A	25 %	Low Fuming Bronze has a high tensile strength and good ductility. It is a machinable brazing alloy used on steels, copper alloys, nickel alloys, and stainless steel. The weld deposit freezes rapidly from fluid to a plastic state. Preheat is required for some applications and a brazing flux is recommended. Low Fuming Bronze is available in bare and flux-coated. The weld deposits are non-porous for leak proof joints for water, oil and gas lines.	
Nickel Silver	70 ksi	N/A	25 %	Nickel Silver is a low fuming, cadmium-free bronze. It is an excellent replacement for high cost silver brazing alloys when higher brazing temperatures are acceptable. The weld deposits of Nickel Silver have very high tensile strength, good ductility and excellent corrosion resistance and are also machinable and work-harden when put into service. Preheating may be desired for some applications. A neutral or slightly oxidizing flame is recommended. Used for brazing Tungsten carbides, copper alloys, nickel alloys, stainless steels & carbon steels, brazing or oxyacetylene welding of steel or cast iron where good color match is desired and building-up or overlaying worn parts such as gear teeth, bearings and valve seats.	

Nickel Alloy Bare Wire

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application		
Alloy 55	89.5 ksi	62 ksi	35 %	Alloy 55 welds are moderately hard and require carbide tipped tools for machining. A preheat and interpass temperature of not less than 350°F (175°C) is required during welding, without which the weld and heat affected zones could develop cracks. The weld metal of 55 is harder than that of 99. Alloy 55 is used for TIG and MIG welding of cast iron. This filler metal is extensively employed to overlay the cast iron rolls and is also used for the repair of castings.		
Alloy 99	66.5 ksi	36 ksi	40 %	Alloy 99 welds are easily machinable, however, dilution from the casting influences the mechanical properties of the metal. A preheat and interpass temperature of 350°F (175°C) minimum is recommended during welding. Alloy 99 is used for TIG and MIG welding of cast iron. This wire is extensively employed to repair gray iron castings. It can also be used for overlay and build-up.		
Alloy 59	110 ksi	N/A	25 %	Alloy 59 is a Ni-Cr-Mo alloy with an extra low-carbon and silicon content. This wire has excellent corrosion resistance and high mechanical strength. Alloy 59 is used to weld low-carbon Ni-Cr-Mo alloys to themselves and for dissimilar welding of alloys such as C-276, 22, 625 and other high alloy steels such as 6Mo stainless, 825, and even common grades of stainless steels. Some base metals that Alloy 59 are used on are ASTM and ASME B and SB 574, 575, 619, 622, and 626.		
Alloy 60	76.5 ksi	52.5 ksi	34 %	Alloy 60 is used for TIG, or MIG welding of nickel copper alloys (ASTM B127, B163, B164, and B165 UNS Number N04400). This filler metal can be used for MIG overlay on steel after a first layer with nickel 208 (Filler Metal 61). Alloy 60 is widely used in marine applications because of its good resistance to the corrosive effects of seawater and brackish waters. Dissimilar welding applications include joining Monel alloys to Nickel 200 and copper-nickel alloys.		
Alloy 61	66.5 ksi	38 ksi	28 %	Alloy 61 is used for TIG, MIG, and SAW welding of nickel 200 or 201. Alloy 61 is used for overlaying on steel, repairing cast iron castings and for dissimilar joints between nickel or nickel alloys to stainless or ferritic steels.		
Alloy 62	80 ksi	79 ksi	30 %	Alloy 62 is used for welding nickel-chromium iron alloy (600) to itself using the GTAW, GMAW, SAW, and PAW processes. The higher niobium content of Alloy 62 is intended to minimize cracking where high welding stresses are encountered, as in thick-section base metal up to 2".		
Alloy 65	88.5 ksi	61 ksi	34 %	Alloy 65 is used for TIG, MIG, and SAW welding of Ni-Fe-CR-Mo-Cu alloys such as alloy 825. The weld metal is highly resistant to corrosion particularly in reducing chemicals such as sulphuric and phosphoric acids. Alloy 65 can be used to overlay cladding where similar chemical composition is required.		
Alloy 67	53 ksi	21 ksi	32 %	Alloy 67 is used for TIG, MIG, and oxy-fuel welding of 70/30, 80/20, and 90/10 copper-nickel alloys. This filler metal can be used for MIG overlay on steel after a first layer with Nickel 208 (Filler Metal 61). Dissimilar-welding applications for Alloy 67 include joining copper-nickel alloys to Nickel 200 or nickel-copper alloys.		

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
Alloy 82	53 ksi	21 ksi	32 %	Alloy 82 is used for TIG, MIG, and SAW welding of base materials such as ASTM B163, B166, B167, and B168 alloys which have UNS Number N0660. Alloy 82 is one of the most used nickel alloys whose applications range from cryogenic to high-temperatures. This filler metal can also be used for dissimilar welding applications between various nickel alloys and stainless or carbon steels, as well as for overlaying.
Alloy 92	80 ksi	80 ksi	30 %	Alloy 92 is used for cladding steel with nickel-chromiumiron weld metal and for joining steel to nickel-base alloys using the GTAW, GMAW, SAW, and PAW processes. The weld metal will age harden on heat treatment.
Alloy 601	90 ksi	90 ksi	25 %	Alloy 601 is used for welding nickel-chromium-iron-aluminum alloy (601) to itself and to other high-temperature compositions using the GTAW process. It is used for severe applications where the exposure temperature can exceed 2100°F (1150°).
Alloy 617	94 ksi	94 ksi	42 %	Alloy 617 is used for welding nickel-chromium-cobalt-molybdenum alloy to itself using the GTAW and GMAW processes. Alloy 617 can also be used for welding joints of dissimilar steels and for elevated temperature service.
Alloy 622	115 ksi	82 ksi	38 %	Alloy 622 is an alloy of nickel with chromium molybdenum and tungsten as principal alloying elements. 622 offers excellent corrosion resistance in oxidizing as well as reducing media in a wide variety of chemical process environments. It offers an outstanding resistance to stress corrosion cracking, pitting, and crevice corrosion. Alloy 622 is used to weld alloys of similar composition as well as dissimilar joints between nickel-chromium-molybdenum alloys and stainless or carbon or low alloy steels. It can also be used for cladded overlay as well as spraying applications.
Alloy 625	114.5 ksi	85 ksi	35 %	Alloy 625 is used for GMAW, GTAW and SAW of Ni-Cr-Mo alloys. This filler metal may be used for cladding and welding dissimilar base metals such as Ni-Cr-Mo alloys to stainless and carbon steels. Alloy 625 provides excellent resistance to oxidizing and reducing environments and good stress, pitting and crevice corrosion resistance because of this alloys high Mo content.
Alloy 718	165 ksi	165 ksi	25 %	Alloy 718 is used for welding nickel-chromium-niobium-molybdenum alloy (718) to itself using the GTAW processes. Alloy 718 is a precipitation hardenable nickel-base alloy designed to display exceptionally high yield, tensile and creep-rupture properties at temperatures up to 1300°F (704°C). The sluggish age-hardening response of AFM 718 permits annealing and welding without spontaneous hardening during heating and cooling. Alloy 718 has excellent weldability when compared to the nickel-base superalloys hardened by aluminum and titanium.
Alloy C276	105 ksi	81 ksi	40 %	Alloy C276 is used for GMAW, GTAW and SAW processes of nickel alloys with Cr and Mo. This grade may also be used for welding nickel alloys to dissimilar base metals such as stainless steel or low alloy steels. Alloy C276 is also used for overlay cladding of low alloy or carbon steel to provide general corrosion resistance and, due to the high-molybdenum content, a strong resistance to stress corrosion cracking, pitting and crevice corrosion.
Alloy W	105 ksi	81 ksi	40 %	Alloy W is a superalloy most commonly used for joining dissimilar combinations of cobalt and nickel base alloys used in high- temperature service applications. The weld deposit exhibits good mechanical properties up to 1800°F, however it does exhibit poor oxidation resistance above 1400°F and it should not be used for service applications in excess of 750 hours. Alloy W displays excellent dissimilar welding characteristics, and is widely used in the gas turbine, aerospace, and chemical process industries.
Alloy X	95 ksi	N/A	N/A	Alloy X is a solid-solution-strengthened superalloy that combines very good high-temperature strength with very good resistance to oxidizing environments up to about 2000°F (1095°C), and good carburization resistance. Alloy X may be cold-formed or hot-formed by various techniques, and is readily weldable by most standard methods. Alloy X is one of the most widely used materials for fabrication of forged parts in gas turbine engines, and is also used in chemical and petrochemical plants, power plants and industrial heating applications.

Nickel Alloy Coated Electrodes

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application	
E55	84 ksi	59.5 ksi	8 %	E55 welds are moderately hard and require carbide tipped tools for machining. A preheat and interpass temperature of not less than 350°F (175°C) is required during welding. E55 is used for the repair of castings, welding of cast irons to themselves as well as for joining cast irons to mild steels.	
E99	72 ksi	56.5 ksi	5 %	E99 welds are quite machinable. A preheat and interpass temperature of not less than 350°F is recommended during welding. E99 is designed for welding of gray iron castings to themselves as well as joining them to mild steels or stainless steels. It is also used extensively to repair castings.	
E112	114.5 ksi	89.5 ksi	34 %	E112 is a coated electrode which is used to weld nickel-chromium-molybdenum alloys. It is also used extensively in overlay cladding where similar chemical composition is required on the clad side. E112's applications include dissimilar joints between nickel-chromium-molybdenum alloys to either stainless steels, carbon, or low alloy steels. These electrodes are used in applications where the temperature ranges from cryogenic up to 1800°F.	
E117	110 ksi	87 ksi	26 %	The weld metal of E117 provides optimum strength and oxidation resistance above 1500°F up to 2100°F, especially when welding on base metals of Ni-Fe-Cr alloys. E117 is used for welding of Ni-Cr-Co-Mo alloys (UNS number N06617). This electrode can also be used for overlay cladding where similar alloy is required.	
E122	110 ksi	87 ksi	26 %	E122 is used for welding nickel chromium-molybdenum alloys, for the welding of the clad side of joints in steel clad with nickel chromium-molybdenum alloy, to steel and to their nickel-base alloys; and for joining nickel chromium-molybdenum alloys. Typical specifications for the nickel-chromium molybdenum base metals have UNS Number N06022.	
E141	64.5 ksi	58.5 ksi	26 %	E141 weld metal has excellent corrosion resistance to caustic alkalies such as caustic soda and caustic potash. E141 is used for welding of cast and wrought forms of commercially pure nickel. These electrodes can also be used for surfacing as well as dissimilar welding between nickel and steel or stainless steel.	

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application			
E182	64.5 ksi	58.5 ksi	26 %	E182 electrodes are used for welding of nickel-chromium-iron alloys to themselves, and for dissimilar welding between nickel-chromium-iron alloys and steels or stainless steels. High manganese of this weld deposit reduces the possibility of micro fissures. High manganese reduces creep strength, which limits its usage up to 900°F. E182 applications include surfacing as well as clad-side welding.			
E187	54.5 ksi	37.5 ksi	28 %	E187 is a copper-nickel, all-position electrode for shielded metal arc welding of wrought or cast alloys of similar composition as well as 80 Cu + 20 Ni and 90 Cu + 10 Ni alloys. It is also used for the clad side of copper-nickel clad steels. E187 filler metal is widely used in marine applications because of its good resistance to the corrosive effects of sea water.			
E190	75.5 ksi	52 ksi	39 %	E190 is used for welding materials of nickel-copper alloys to themselves (such as ASTM, B126, B163, B164, B165 all of which have UNS Number N04400). 190 can also be used for overlay welding as well as for welding of clad steels where nickel-copper surfacing is required. Dissimilar welding applications include joining nickel 200 and copper-nickel alloys. E190 filler metal is widely used in marine applications due to its excellent resistance to the corrosive effects of seawater.			
Weld A	75.5 ksi	52 ksi	39 %	Weld A electrodes are used for welding of nickel-chromium-iron alloys to themselves as well as for dissimilar welding between various nickel alloys and carbon or stainless steels. These electrodes have wide applications ranging from cryogenic temperatures up to 1500°F. These electrodes can also be used for overlay cladding where similar alloy is needed.			
C276	106 ksi	78.5 ksi	39 %	C276's high-molybdenum content offers excellent resistance to stress corrosion cracking, pitting and crevice corrosion and used for overlay cladding to withstand process corrosion. C276 weld metal is capable of withstanding cryogenic temperatures. C276 is used for welding materials of similar composition. This low-carbon nickel-chromium-molybdenum filler metal can also be used for dissimilar welding between nickel base alloys and stainless steels, or low alloy steels.			
X	95 ksi	N/A	N/A	Alloy X is a solid-solution-strengthened superalloy that combines very good high-temperature strength with very good resistance to oxidizing environments up to about 2000°F (1095°C), and good carburization resistance. Alloy X may be cold formed or hot-formed by various techniques, and is readily weldable by most standard methods. Alloy X is one of the most widely used materials for fabrication of forged parts in gas turbine engines, and is also used in chemical and petrochemical plant, power plant and industrial heating applications.			
82-T1	89 ksi	58 ksi	26 %	82-T1 is a gas shielded flux cored wire that can be used for welding in all positions using 100% C02 or Argon/ C02 mixtures. The wire possesses excellent weldability and can be used in a wide variety of similar and dissimilar welding and cladding applications. Typical applications include joining Ni-Cr-Fe alloys, clad side of joints in steels clad with Ni-Cr-Fe weld metal, surfacing steel with Ni-Cr-Fe weld metal and joining Inconel [®] 600, 601 and Incoloy [®] 800 to themselves or to stainless and carbon steels.			
622-T1	115 ksi	82 ksi	34 %	622-TI is a gas shielded flux cored wire for welding in all positions using 100% C02 or Argon/C02 mixtures. The wire has excellent weldability and can be used in a wide variety of similar and dissimilar welding and cladding applications. 622-TI applications include joining Ni-Cr-Mo alloys, clad side of joints in steels clad with Ni-Cr-Mo weld metal, surfacing steel with Ni-Cr-Mo weld metal and joining high-molybdenum – high nitrogen containing stainless steels.			
625-T1	115 ksi	82 ksi	34 %	625-TI is a gas shielded flux cored wire used for welding in all positions using 100% C02 or Argon/C02 mixtures. The wire has excellent weldability and can be used in a wide variety of similar and dissimilar welding and cladding applications. Some applications for 625-TI include joining Ni-Cr-Mo alloys, clad side of joints in steels clad with Ni-Cr-Mo weld metal, surfacing steel with Ni-Cr-Mo weld metal, joining steels to nickel based alloys and joining 9% nickel steel for cryogenic applications.			
C276-T1	110 ksi	75 ksi	37 %	C276-T1 is a gas shielded flux cored wire that can be used for welding in all positions using 100% CO2 or Argon/CO2 mixtures. Typical specifications for Ni-Cr-Mo base metals are ASTM B574, B575, B619, B622 and B626, all of which have UNS# N10276. C276-T1 possesses excellent weldability and is used in welding low-carbon Ni-Cr-Mo alloys to other nickel base alloys.			

Cobalt Alloys

AWS Designation	Abrasion Resistance	Impact Resistance	Corrosion Resistance	Hardness	Hot Hardness	Description & Application
1 - Welding Rod	Excellent	Fair	Good	HRC 48-56	Very Good	Bare cobalt based alloy containing chromium and tungsten. This rod has the highest hardness of the standard cobalt alloys which gives it have an excellent resistance to abrasion, heat and corrosion. It can be machined or ground with difficulty using carbide tools. This rod bonds well with stainless and other weldable grade steels. Used for mixer seals and rotors, hydro pulper disc segments, chemical valve balls and seats, oil drilling tools and carbon scrapers.
6 - Welding Rod	Very Good	Very Good	Good	HRC 38-46	Up to 1200°F	This rod provides resistance to many forms of chemical and mechanical degradation over a wide temperature range. It is the most versatile and widely used cobalt alloy, with a good balance of abrasion and impact resistance. Particular attributes are its outstanding anti-galling properties, high-temperature hardness and high resistance to cavitation erosion that results in its wide use as a valve seat material. It bonds well to all weldable grade steels and stainless. Used for zinc tanks, trimmer dies, forging dies, guide rolls, diesel engine valves, trunnions, chemical and steam valve trim, bearing and bushing areas and plastic extrusion screws.
12 - Welding Rod	Excellent	Good	Good	HRC 44-50	Excellent	This 12 Bare rod is slightly harder than Bare rod 6 with better abrasive and metal-to-metal wear resistance. It produces a high hardness cobalt-chromium deposit. The chromium carbides contained in the deposit provide excellent resistance to many forms of chemical and mechanical degradation, including galling. It bonds well with all weldable steels, including stainless. Used for high-pressure valve, shear edge, saw teeth, etc.

WWW.TECHNIWELDUSA.COM



AWS Designation	Abrasion Resistance	Impact Resistance	Corrosion Resistance	Hardness	Hot Hardness	Description & Application
21 - Welding Rod	Fair	Excellent	Good	HRC 40-45	Excellent	The 21 Bare rod deposits a low-carbon austenitic cobalt type alloy with excellent work hardenability, high-temperature strength, and impact resistance. The least crack sensitive of all the cobalt based alloys. Resistance to galling corrosion and cavitation erosion. This alloy, a low-carbon, molybdenum strengthened cobalt-chromium alloy will work harden to Rc 45+ with excellent impact and metal to metal wear qualities, especially at high-temperatures. Used for overlays in hot extrusion and forging dies, trimmers, punches and hot shear blades, valve trim on steam and fluid control valve bodies and seats.
1 Coated Coated Electrodes	Excellent	Fair	Good	HRC 48-56	Very Good	Flux-coated cobalt based alloy containing chromium and tungsten. This rod has the highest hardness of the standard cobalt alloys which gives it an excellent resistance to abrasion, heat and corrosion. It can be machined or ground with difficulty using carbide tools. This rod bonds well with stainless and other welding grade steels. Used for mixer seals and rotors, hydro pulper disc segments, chemical valve balls and seats, oil drilling tools and carbon scrapers.
6 Coated Coated Electrodes	Very Good	Very Good	Good	HRC 38-46	Up to 1200°F	This flux-coated cobalt based electrode provides resistance to many forms of chemical and mechanical degradation over a wide temperature range. It is the most versatile and widely used cobalt alloy, with a good balance of abrasion and impact resistance. Particular attributes are its outstanding anti-galling properties, high-temperature hardness and high resistance to cavitation erosion. It bonds well to all weldable grade steels and stainless. Used for zinc tanks, trimmer dies, forging dies, guide rolls, diesel engine valves, trunnions, chemical and steam valve trim, bearing and bushing areas and plastic extrusion screws.
12 Coated Coated Electrodes	Excellent	Good	Good	HRC 44-50	Excellent	This flux-coated cobalt based electrode is slightly harder than Coated 6 with better abrasive wear, good impact resistance, and metal-to-metal wear resistance. It produces a high hardness cobalt-chromium deposit. Chromium carbides contained in the deposit provide excellent resistance to many forms of chemical and mechanical degradation, including galling. It bonds well with all weldable steels, including stainless. Used for high-pressure valve, shear edge, saw teeth, etc.
21 Coated Coated Electrodes	Fair	Excellent	Good	HRC 40-45	Excellent	The 21 coated electrode deposits a low-carbon austenitic type cobalt alloy with excellent work hardenability, high-temperature strength, and impact resistance. The least crack sensitive of all the cobalt based alloys. Resistance to galling corrosion and cavitation erosion. This low-carbon, molybdenum strengthened, cobalt-chromium alloy provides good strength and ductility, as well as excellent impact and metal to metal wear qualities, especially at temperatures to 1600°F. Used for overlays in hot extrusion and forging dies, trimmers, punches and hot shear blades, valve trim on steam and fluid control valve bodies and seats.
1M Welding Wire	Excellent	Fair	Good	HRC 48-56	Very Good	1M is the tubular wire version of the highest hardness standard cobalt alloy which gives it an excellent resistance to abrasion, heat and corrosion. It can be machined or ground with difficulty using carbide tools. This rod bonds well with stainless and other welding grade steels. Used for mixer rotors, hydro pulper disc segments, screw components, cross heads, soaking bit-tong bits, pump sleeves & pumps.
6M Welding Wire	Very Good	Very Good	Good	HRC 38-46	Up to 1200°F	6M is the tubular wire version of a cobalt alloy that provides resistance to many forms of chemical and mechanical degradation over a wide temperature range. It is the most versatile and widely used cobalt alloy, with a good balance of abrasion and impact resistance. Particular attributes are its outstanding anti-galling properties, high-temperature hardness and high resistance to cavitation erosion. It bonds well to all weldable grade steels and stainless. Used for zinc tanks, trimmer dies, forging dies, guide rolls, diesel engine valves, trunnions, chemical and steam valve trim, bearing and bushing areas and plastic extrusion screws.
12M Welding Wire	Excellent	Good	Good	HRC 44-50	Excellent	12M is the tubular wire version of a cobalt alloy that is slightly harder than 6M with better abrasive and metal-to-metal wear resistance. It produces a high hardness cobalt-chromium deposit for high-temperature applications. The chromium carbides contained in the deposit provide excellent resistance to many forms of chemical and mechanical degradation, including galling. It bonds well with all weldable steels, including stainless. Used for high-pressure valve, shear edge, saw teeth, etc.
21M Welding Wire	Fair	Excellent	Good	HRC 40-45	Excellent	21M is the tubular wire version of a cobalt alloy that deposits a low-carbon austenitic cobalt type alloy with excellent work hardenability, high-temperature strength, and impact resistance. The least crack sensitive of all the cobalt based alloys. Resistance to galling corrosion and cavitation erosion. This low-carbon, molybdenum strengthened cobalt-chromium alloy will have excellent impact and metal to metal wear qualities up to 2100°F. Bonds well to all weldable steels, including stainless. Used for overlays in hot extrusion and forging disc trimmers, punches and hot short blades view trim on team and fluid ontrol, why badies and scate

Titanium and Zirconium Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ERTi-1	35.0 ksi	25.0 ksi	24 %	ERTI-1 is the lowest strength unalloyed, or commercially pure titanium available and is extremely reactive above 1000°F and extra precaution must be taken to have a successful weld. It can be welded by the GTAW, GMAW and plasma arc process. ERTI-1 is used in applications where ductility is most important such as explosive cladding, expanded metal, and deep drawing applications.
ERTi-2	50.0 ksi	40.0 ksi	20 %	ERTi-2 is the "workhorse" of titaniums in the commercially pure titaniums available. As with all titanium alloys ERTi-1 is extremely reactive above 1000°F and extra precaution must be taken to have a successful weld. It can be welded by the GTAW, GMAW and plasma arc process. ERTi-2 is usually used on pressure vessels, pipes, columns, tanks, shafts, valves, and fittings.
ERTi-5	130.0 ksi	120.0 ksi	10 %	ERTI-5 is also known as 6-4 titanium and is the most common and widely used titanium alloy due to its relatively low cost and easy availability. ERTI-5 can be heat treated to a higher strength or toughness making the weldability good. The corrosion resistance is comparable to ERTI-2 and can be welded by the GTAW, GMAW and plasma arc processes. ERTI-5 is used in aircraft components such as landing gear, wing soars, and compressor blades.

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
ERTi-7	N/A	N/A	N/A	ERTi-7 (Grade 7) has the same mechanical properties as ERTi-2 (Grade 2). The 0.12 wt % palladium addition improves corrosion performance under mildly reducing conditions or where crevice or under-deposit corrosion is a problem. ERTi-7 (Grade 7) can be considered for welding ERTi-2 (Grade 2) or 16 where improved corrosion performance is desired. This alloy extends the use of titanium into mildly reducing media, to much higher chloride levels, or where the environment fluctuates between oxidizing and reducing.
ERTI-23	N/A	N/A	N/A	ERTi-23 (Grade 23, Ti 6AI-4V) is comparable in chemical composition to Grade 5, but slightly lower aluminum and lower levels of oxygen and other interstitial elements improve fabricability, weldability, and toughness. ERTi-23 (Grade 23) is used in many high-strength industrial applications such as shafts where very high-strength, but better toughness and fabricability than Grade 5 is desired. This grade is often specified for marine and offshore energy production components that are exposed to low temperature seawater due to higher fracture toughness values than Grade 5. With special processing, this alloy can develop high fracture toughness. Primary uses are in surgical implants, cryogenic vessels, and airframe components.
ZR 702	55.0 ksi	30.0 ksi	16 %	ZR 702 has excellent corrosion resistance to many chemical solutions as well as excellent resistance to corrosive attack in most organic and mineral acids, strong alkalis, and some molten salts. ZR 702 can be machined, welded and fabricated using the same equipment and processes used in the fabrication of stainless steel, nickel-based alloys and titanium. ZR 702 is most widely used in the chemical processing industry that require alternate contact with strong acids and alkalis. It is used to weld heat exchangers, stripper columns, reactor vessels, corrosive media piping, pumps, and valves. ZR 702 cannot be welded directly to most other structural metals, the exceptions are titanium, vanadium and niobium.

Aerospace Alloys

Aluminum Alloy Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition		
4180	1100	99.0 AI		
4181	4008 (A356.0)	7.0Si 0.38Mg 0.10Ti		
4184	4145	10Si 4.0Cu		
4185	4047	12Si		
4190	4043	5.2Si		
4191	2319	6.3Cu 0.30Mn 0.18Zr 0.15Ti 0.10V		
4233	201.0	4.5Cu 0.70Ag 0.30Mn 0.25Mg 0.25Ti		
4244	206.0	4.6Cu 0.35Mn 0.25Mg 0.22Ti		
4245	355.0	5.0Si 1.2Cu 0.50Mg		
4246	357.0	7.0Si 0.52Mg		

Silver Brazing Filler Metals			
AMS Spec.	Alloy	Nominal Chemical Composition	
4761	BAg-34	38.0Ag 32.0Cu 28.0Zn 2.0Sn	
4763	BAg-7	56.0Ag 22.0Cu 17.0Zn 5.05 Sn	
4765	BAg-13a	56.0Ag 42.0Cu 2.0Ni	
4766	BAg-23	85.0Ag 15.0Mn	
4767	BAg-19	92.5Ag 7.2Cu 0.22Li	
4768	BAg-2	35.0Ag 26.0Cu 21.0Zn 15.0Cu	
4769	BAg-1	45.0Ag 24.0Cd 16.0Zn 15.0Cu	
4770	BAg-1a	50.0Ag 18.0Cd 16.5Zn 15.5Cu	
4771	BAg-3	50.0Ag 16.0Cd 15.5Zn 15.5Cu 3.0Ni	
4772	BAg-13	54.0Ag 40.0Cu 5.0Zn 1.0Ni	
4773	BAg-18	60.0Ag 30.0Cu 10.0Sn	
4774	BAg-21	63.0Ag 28.5Cu 6.0Sn 2.5Ni	

Magnesium Alloy Filler Metals					
AMS Spec. Alloy Nominal Chemical Composition					
4395	AZ92A	9.0AI 2.0Zn			
4396	EZ33A	3.3Ce 2.5Zn 0.72Zr			
4418	QE22A	2.5Ag 2.1Di 0.70Zr			

Nickel Base Brazing Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition		
4775	BNi-1	73.0Ni 4.5Si 14.0Cr 3.1B 4.5Fe 0 .75C		
4777	BNi-2	82.0Ni 4.5Si 7.0Cr 3.1B 3.0Fe		

Titanium Alloy Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition		
4951	CP-Ti	0.08C 0.180 0.005H 0.05N 0.20Fe Ti Bal		
4952	6-2-4-2	6.0Al 2.0Sn 4.0Zr 2.0Mo		
4953	5Al 2.5Sn	5.0 Al-2.5 Sn		
4954	6AI-4V	0.05C 0.120 0.015H 0.03N 6.75AI 4.50V 0.30Fe Ti Bal		
4955	8-1-1	0.08C 0.120 0.01H 0.05N 8.0AI 1.0Mo 1.0V Ti Bal		
4956	6AI-4V(ELI)	0.03C 0.080 0.005H 0.012N 6.75AI 4.5V 0.15Fe 0.10Mn Ti Bal		

Titanium Alloy Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition		
6452	4140VM	0.95Cr 0.20Mo (0.38- 0.43C)		
6453	Hy Tuf	0.30Cr 1.8Ni 0.40Mo (0.23-0.28C)		
6456	4340VM	0.80Cr 1.8Ni 0.25Mo (0.35-0.40C)		
6457	4140VM	0.95Cr 0.20Mo (0.28-0.33C)		
6458	17-22A (S)	0.65Si 1.25Cr 0.50Mo 0.30V (0.28-0.33C)		
6461	6130VM	0.95Cr 0.20V (0.28-0.33C)		
6462	6130	0.95Cr 0.20V (0.28-0.33C)		
6466	502	5.2Cr 0 .55Mo		
6468	HP9-4-20	1.0Cr 3.8Co 0.45Mo 0.08V (0.14-0.17C)		



Aerospace Alloys

Corrosion & Heat Resistant Steels and Alloy Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition		
5675	Inconel 92	70.0Ni 15.5Cr 7.0Fe 3.0Ti 2.4Mn		
5679	Inconel 62	73.0Ni 15.5Cr 2.2Cb 8.0Fe		
5680	347 Stainless	18.5Cr 11.0Ni 0.40(Cb+Ta)		
5689	321 Stainless	18.0Cr 10.5Ni 0.40Ti		
5692	316 Stainless	19.0Cr 12.5Ni 2.5Mo		
5694	310 Stainless	27.0 Cr 21.5Ni		
5774	AM-350	16.5Cr 4.5Ni 2.9Mo 0.10N		
5776	410 Stainless	12.5Cr		
5778	Inconel 69	72.0Ni 15.5Cr 2.4Ti 1(Cb+Ta) 0.70Al 7.0Fe		
5782	19-9WMo	20.5Cr 9.0Ni 0.50Mo 1.5W 1.2(Cb+Ta) 0.20Ti		
5784	29-9 (312)	29.0 Cr-9.5Ni		
5786	Hastelloy W	62.5Ni 5.0Cr 24.5Mo 5.5Fe		
5789	Stellite 31	54.0Co 25.5Cr 10.5Ni 7.5W		
5794	Multimet (N-155)	31.0Fe 21.0Cr 20.0Ni 20.0Co 3.0Mo 2.5Wi 1(Cb+Ta) 0.15N		
5796	Haynes 25 (L-605)	52.0Co 20.0Cr 10.0Ni 15.0W		
5798	Hastelloy X	47.5Ni 22.0Cr 1.5Co 9.0Mo 0.60W 18.5Fe		
5800	Rene 41	54.0Ni 19.0Cr 11.0Mo 3.2Ti 1.5Al 0.006B		
5801	Haynes 188	39.0Co 22.0Cr 22.0Ni 14.5W 0.07La		
5804	A286	15.0Cr 25.5Ni 1.3Mo 2.2Ti 0.006B 0.30V		
Hastelloy [®] , Stellite [®] , Haynes [®] and Multimet [®] are registered trademarks of Cabot Corporation. Inconel [®] , Incoloy [®] and Monel [®] are registered trademarks of Special Metals Corporation. Rene 41 [®] is a registered trademark of Teledyne-Allvac.				

 $\ensuremath{\mathsf{Waspaloy}}\xspace^\circ$ is a registered trademark of Pratt and Whitney Aircraft.

	Silver Brazing Filler Metals				
AMS Spec.	Alloy	Nominal Chemical Composition			
5805	A286VM	15.0Cr 25.5Ni 1.3Mo 2.2Ti 0.004B 0.30V			
5806	903	42.0Fe 38.0Ni 15.0Co 3.0(Cb+Ta) 1.4Ti 0.92Al			
5812	15-7Mo VM	15.0Cr 7.1Ni 2.4Mo 1.0Al			
5813	15-7Mo	15.0Cr 7.1Ni 2.4Mo 1.0Al			
5817	Greek Ascoloy	13.0Cr 2.0Ni 3.0W			
5821	410 Mod	12.0Cr Ferrite Controlled			
5823	Jethete M-190	11.8Cr 2.8Ni 1.6Co 1.8Mo 0.32 V			
5824	17-7PH	17.0Cr 7.1Ni 1.0Al			
5825	17-4PH	16.4Cr 4.8Ni 0.22Cb 3.2Cu			
5826	15-5PH	15.0Cr 5.1Ni 0.30Cb 3.2Cu			
5828	Waspaloy	57.0Ni 19.5Cr 13.5Co 4.2Mo 3.1Ti 1.4Al 0.006B			
5830	901	12.5Cr 42.5Ni 6.0Mo 2.7Ti 0.015B 25.0Fe			
5831	556	29Fe 22Cr 21Ni 18.5Co 3.2Mo 2.8W 0.78Ta 0.30Al 0.05Zr.05La 0.20N			
5832	718	52.5Ni 19.0Cr 5.1(Cb+Ta) 0.90Ti 0.50Al 18.0Fe			
5836	FM-82	72.0Ni 20.0Cr 3.0Mn 2.5Cb			
5837	625	62.0Ni 21.5Cr 9.0Mo 3.7(Cb+Ta)			
5838	Hastelloy S	65.0Ni 16.0Cr 15.0Mo 0.30Al 0.06 La			
5840	PH13-8Mo	13.0Cr 8.0Ni 2.3Mo 1.1Al			

Hardfacing Electrodes

AWS Designation	F	Recommend	ed Amperag	e (AC or DC+	·)	Description, Application & Procedure
300	Dia. (inch)	1/8″	5/32"	3/16"	1/4"	300 is a build-up and overlaying electrode for all ferrous metals subjected to moderate abrasion, severe impact and corrosion. Weld deposits of 300 are strong and tough, however with an average hardness of Rc 26-31, they do remain machinable. Typical applications include tractor rollers, sprockets, idlers, concrete mixer blades, bearing
	Dia. (mm)	3.2 mm	4.0 mm	4.8 mm	6.4 mm	journals and other parts which require machinable weld deposits. Clean the weld area. Use AC or DC+ polarity. Preheating is not required, although heavier sections should be preheated to 200-300°F. Maintain a medium arc length and use a weaving technique or stringer beads up to twice the diameter of the electrode. Avoid the build-up
	AMPS	60 - 130	120 - 180	170 - 240	240 - 300	of heat at any one location on the base metal. Remove slag between passes and allow the base metal to air cool. If severe abrasion is encountered, a final pass of AFM 800 should be considered.
700	Dia. (inch)	1/8″	5/32"	3/16"	1/4"	700 is a severe abrasion and considerable impact hardfacing electrode. Weld deposits have a marte structure that resists wear even in metal-to-metal mild steel contact. When used in the flat and hori positions, this electrode will exhibit a stable arc and produce weld deposits that are very smooth and rippled. Typical applications for 700 include plowshares, cultivator shoes, bucket teeth and lips, well drillin cement mixer blades, shovel tracks and screw conveyors. Use AC or DC+. Preheating is generally not requising the weaving technique and keeping a short arc length, deposit up to 1/4" maximum. If more than
	Dia. (mm)	3.2 mm	4.0 mm	4.8 mm	6.4 mm	
	AMPS	110 - 130	140 - 170	180 - 210	220 - 300	passes will be required, it is suggested that a "padding layer" of 300 be used prior to depositing 700.
800	Dia. (inch)	1/8"	5/32"	3/16"	1/4"	800 is a hardsurfacing electrode used for severe abrasion, light impact, and corrosion resistance. This electrode produces an extremely hard martensite-structure weld deposit which is not machinable in the "as-welded" condition. 800 will lay down a smooth. corrosion resistant weld deposit which will remain extremely hard even
	Dia. (mm)	3.2 mm	4.0 mm	4.8 mm	6.4 mm	at elevated temperatures. Typical applications for 800 include mill hammers, bucket teeth, valve seats, mixers, crusher rolls, tamper rollers, and other mild steel, carbon or alloy steels as well as manganese steels. Use AC or DC+. Preheating is not required except on alloy steels. Using a short gap and a weaving technique, deposit two
	AMPS	90 - 130	140 - 170	190 - 240	220 - 300	layers. If more than two passes are required, use 300 to provide a padding layer prior to using 800.

Γ

AWS Designation	Recommended Amperage (AC or DC+)					Description, Application & Procedure
900	Dia. (inch)	1/8″	5/32"	3/16"	1/4"	900 is a hardsurfacing overlay electrode used for the fabrication and build up of high manganese and alloy steels which are subjected to heavy impact and severe abrasion. The weld deposits have an austenitic structure and work
	Dia. (mm)	3.2 mm	4.0 mm	4.8 mm	6.4 mm	harden although remaining extremely ductile. Weld deposits are machinable and forgeable. Typical applications of 900 include repairing railroad switches, frogs and tracks, bucket teeth and lips, rock crushers, mill hammers and bulldozer parts. When the base metal of 13% manganese steel is hardened, cut-off the hardened zone before
	AMPS	75 - 130	120 - 190	175 - 240	230 - 280	welding. Welding should be done at the lowest possible temperature. Maintain a short to medium arc length using a slight weaving technique to make the deposit smooth and even. Water or air cool the weld metal during welding. Do not preheat manganese steels. Do not overheat the base metal. Peening is recommended to relieve stresses.
Chrom-Carb	Dia. (inch)	3/32"	1/8″	5/32"	3/16"	Chrom-Carb is a chromium-tungsten flux-coated hardsurfacing electrode designed to produce extremely weld metal deposits on parts exposed to severe mineral abrasion with low impact. The extreme hardne Chrom-Carb deposits is achieved through the formation of chromium and tungsten carbides within the
	Dia. (mm)	2.4 mm	3.2 mm	4.0 mm	4.8 mm	of the weld deposit. Typical applications include earth moving and rock crushing equipment, augers, asphalt feed screws, sand pumps, mixer blades and crushing or pulverizing mills,parts which require machinable weld deposits. Maintain a short arc length and hold the electrode vertical to the work piece. Chrom-Carb can be used
	AMPS	70 - 90	110 - 130	160 - 190	220 - 250	on both AC or DC machines. Excellent for hardfacing large surface areas using wide weave beads. Chrom-Carb has good operator appeal and yields a very smooth weld bead with superb adherence. Deposition is fast and the weld deposits will last a long time.
Sugar Rod	Dia. (inch)	1/8″	5/32"	3/16"		Sugar Rod is designed for use on carbon and low alloy steels, manganese steels, and cast iron. Deposits take a high polish, which contributes to high frictional and abrasion wear qualities, especially small particle abrasion. Excellent on applications that need impact as well as abrasion resistance. Provides optimum resistance to this combination. Deposits well out of position. Sugar Rod is recommended for severe abrasion applications, along with moderate impact This alloy has a good but bardness un to approximately 1000°E Especially designed for
	Dia. (mm)	3.2 mm	4.0 mm	4.8 mm		
	AMPS	80 - 125	100 - 160	125	- 190	crusher applications. Used heavily in construction, mining, brick and clay industries on parts such as crusher rolls, jaw crushers, bucket teeth, edges, hammers, mill hammers, conveyor screws, etc.

Hardfacing Wires

AWS Designation	Wire Diameter	Electrode Stickout	AMPS	Volts	Description, Application & Procedure
	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	250 is for building up mild and low alloy steel parts to within 3/16"-3/8" of their original size. Weld deposits will be part ferritic-part martensitic in structure. 250 weld deposits have good compressive strength and resistance to plastic deformation. Weld deposits are easily machined in the "as welded" notifican. An excellent undertawment prior to hardsurfacing. Very good impact resistance:
250	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	poor abrasion resistance. 250 Underlaying for hardsurfacing, steel mill wobblers and pads, shafting, small rolls, pump parts. Use DC Reverse Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an interpass temperature of 300° - 480°F is maintained.
000	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	300 is similar to 250 in weld deposit structure and uses. 300 offers a slightly harder weld deposit than 250 and subsequently it is often used in applications where a hardsurfacing layer is not applied over the 300 deposit. Very good impact resistance;
300	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	(electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° - 480°F is maintained.
070	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	350 has a low alloy deposit that is martensitic in structure. It is machinable and forgeable. A good balance of impact resistance and abrasion resistance as well as hardness make 350 an excellent choice where only one wire is desired for build-up and hardsurfacing. (Not to be used as an underlayment prior to subsequent hardfacing). Very good impact resistance; fair abrasion
350	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	resistance. Overlaying carbon steel shafts, gear teeth, sprockets, steel shovel pads. Use DC Reverse Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° - 480°F is maintained.
350	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	450 is designed for metal to metal abrasion involving impact such as rolling or sliding parts in earth moving equipment where lubrication is not possible. The weld deposits of 450 are martensitic in structure. Very good impact resistance; good abrasion
	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° ~ 480°F is maintained.
450	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	450 is designed for metal to metal abrasion involving impact such as rolling or sliding parts in earth moving equipment where lubrication is not possible. The weld deposits of 450 are martensitic in structure. Very good impact resistance; good abrasion
450	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° ~ 480°F is maintained.
	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	00 offers high abrasion and heavy impact resistance on carbon, low alloy and manganese steel. Weld deposits are martensitic nd corrosion resistant. 600 is designed for metal to metal and metal to earth abrasion. Weld deposits will work harden when ut to service. Excellent impact resistance: excellent abrasion resistance. Extruder screws, bucket lins, tamper feet, tillage tools,
600	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	dredge parts, ore drag lines, muller tires, and wherever high abrasion and heavy pounding is encountered. Use DC Reverse Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° - 480°F is maintained.
700	0.045" (1.2 mm)	1/2" - 3/4"	150 - 250	21 - 26	700 offers a harder weld deposit than 600, but lacks the corrosion resistance. Primarily used for high metal to metal abrasion. Weld deposits are martensitic in structure and will work harden when put into service. Excellent impact resistance; excellent
700	1/16" (1.6 mm)	3/4" - 1"	250 - 350	23 - 28	abrasion resistance, holiers, conveyor screws, crusher rolls, and mill nammers. Use DC Reverse Polarity (electrode positive). The shielding gas should be 100% CO2 welding grade, however a 75% Argon + 25% CO2 mixture will increase the hardness slightly. Superior properties are achieved if an inter pass temperature of 300° - 480°F is maintained.



Maintenance & Repair/Hardfacing

AWS Designation	Tensile Strength	Yield Strength	Elongation	Hardness	Description & Application	
1100	132 ksi	94 ksi	36 %	320 HB	The ultimate electrode for welding all types of steels, without any danger of cracking or breakage. Special "FERRITE BALANCED" Chemistry also allows 1100 to serve as a "STUD PULL" electrode. It is also recommended for repairing worn parts and as an underlay for hardfacing. Due to exceptional strength and crack resistance, it is ideal for repairing tools, dies, spring steel and any dissimilar metal combinations, except for the aluminum and copper alloys.	
Cast SM	84 ksi	N/A	27 %	180 HB	A solid core electrode for welding most types of cast irons, including gray cast iron and spheroidal graphite cast iron parts. With a unique non-nickel series core rod, the weld zone of the reclaimed part is almost indistinguishable from the parent material after welding. The Cast SM also has an extremely smooth welding arc and excellent slag fluidity. Weldability, crack resistance, as well as workability and mechanical properties are all excellent.	
Cast DM	84 ksi	N/A	27 %	180 HB	A solid core electrode for welding most types of cast irons, including gray cast iron and spheroidal graphite cast iron parts as well as dissimilar metals (carbon steel, stainless). With a unique non-nickel series core rod, the weld zone of the reclaimed part is almost indistinguishable from the parent material after welding. The Cast DM also has an extremely smooth welding arc and excellent slag fluidity. Weldability, crack resistance, as well as workability and mechanical properties are all excellent.	

AWS Designation		Deposit Cha	racteristics		Description & Application
Techniwear 21	Hardness	Deposit Thickness	Deposits can be flame cut	Deposits are fully machineable	Low alloy build-up wire with very good compressive strength and resistance to plastic deformation. An ideal base for subsequent overlay with a more wear resistant alloy. An ideal base for subsequent overlay with a more wear resistant alloy. An ideal base for subsequent overlay with a more wear resistant alloy. An ideal base for subsequent overlay with a more wear resistant alloy.
	21-25 Rc	Unlimited			low alloy steels.
Techniwear 31	Hardness	Deposit Thickness	Deposits	Machineable	Medium hardness build-up wire with excellent compressive strength. Recommended for applications where weld deposits must provide good metal-to-metal wear resistance, but still be machinable "as welded". Use on carbon and low allow steels, maching components, steel mill parts, keyways, carbon steel rairrand track
	31-38 Rc	Unlimited	flame cut	carbide tools	components, undercarriage, parts of earth moving and mining equipment, gear teeth, drill string components, rebuilding 4130 and 4140 alloys.
Techniwear 25	Hardness	Deposit Thickness	Deposits can be	Deposits are fully	Low alloy build-up wire with very good compressive strength and resistance to plastic deformation. An ideal base for subsequent overlay with a more wear resistant alloy. Also good when an easily machined "as welded"
	21-25 Rc	Unlimited	flame cut	machineable	deposit is required. Use on carbon and low alloy steels.
Tachniwaar 40	Hardness	Deposit Thickness	Deposits can be flame cut	Machineable with carbide tools	Medium hardness build-up wire with excellent compressive strength. Recommended for applications where weld deposits must provide good metal-to-metal wear resistance, but still be machinable "as welded". Use
iechniwear 40	31-38 Rc	Unlimited			on carbon and low alloy steels. Machine components, steel mill parts, keyways, carbon steel railroad track components, undercarriage, parts of earth moving and mining equipment, gear teeth.
Techniwear 50	Hardness	Deposit Thickness	Deposits can NOT	Deposits are non-machineable	A chromium carbide hardfacing alloy that produces a controlled microstructure of specially sized carbides in a very tough matrix. For applications involving high impact combined with abrasion. Weld metal is tougher than
	45-50 Rc	3-5 layers	be flame cut		conventional chromium carbide alloys with fewer stress relieving check-cracks.
Techniwear 56	Hardness	Deposit Thickness	Good	Deposits are non-machineable	A general purpose self-hardening overlay with a good combination of resistance to abrasion and impact. Techniwear 56 is very tough with excellent resistance to chipping and spalling. Deposits will retain their
ieciiliiweai 50	55-59 Rc	2-3 layers	up to 1100°F		hardness and maintain a good cutting edge up to 1100°F (595°C). Hot shear blades, dozer blades, shearing an piercing dies, bucket teeth, farm implements and augers.
Techniweer 61	Hardness	Deposit Thickness	Deposits can NOT	Deposits are	A premium chromium carbide alloy that has a high volume fraction of carbides dispersed in a hard matrix. For applications involving high abrasion and mild or moderate impact. Deposit polish in service and are heat
recinitiwear of	58-62 Rc	1-2 layers	be flame cut	non-machineable	resistant to 1000°F (531°C). Use on carbon and low alloy steels. Scrapper blades, auger flights, road ripper teeth, screw conveyors, bucket teeth bucket sides and bottoms, mixer blades, tillage tools, fan blades.
Techniwear Chrome Free 65	Hardness	Deposit Thickness	Depos	its are	Techniwear CF65 is an economical high hardness, chromium-free hardfacing overlay designed for applications involving general abrasion or abrasion combined with impact. Machinery and parts in surfacing mining,
	60-65 Rc	2 layers	non-mac	hineable	deep mining, recycling/demolition, tunneling, construction, earth moving, agriculture, processing, mineral processing, dredging, guarry equipment.

Aluminum Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description & Application
1300 Arc Welding Electrode	34 ksi	20 ksi	18 %	1300 is an all position 5% silicon aluminum arc welding electrode with exclusive self-lifting slag. It is used for low-temperature production and maintenance welding of cast and wrought aluminum sheets, plates, castings and extrusions. 1300 is widely used for tanks, pipes, appliances, refrigeration equipment, irrigation equipment, automobile parts and parts found in the chemical, food, and laundry industries.

Maintenance Alloys

AWS Designation	Tensile Strength	Yield Strength	Elongation	Description, Application & Procedure
Patricarc	Up to 120,000 psi	Up to 90,000 psi	Up to 30 %	 High deposition rate. Weld deposits are smooth, ductile, porosity-free and take on a shiny appearance. Weld deposits are impact, abrasion, heat and corrosion resistant. Dissimilar steels, high carbon, tool and die steels, and aircraft steels. Underlayment of hardfacing alloys in mining applications, rebuilding shafts and agitator blades in turbines, frames, cast steel parts and gears. Also perfect to use when the base metal is unknown. Clean the work area. Thick sections should be beveled. A preheat of 400°F is recommended for carbon and cast steels. Maintain a short arc, slightly in the direction of movement and use stringer beads. Peening is recommended.
AM Steel-LH	Up to 80,000 psi	N/A	N/A	High tensile strength ferritic electrode. High quality, all position, low amperage electrode features rapid deposition. Deposits have good ductility, are dense, crack-free, and of x-ray quality. Excellent for steels sensitive to cracking when welded with conventional mild steel electrodes. For "tramp" and "problem" steels high in sulphur, phosphorous, or other elements added to improve the machinability of the steel. For fabrication of "H" and "I" beams, angle and channel iron, pipelines, and all other steel structures. For circular tubes to plate welds, and other type joints subject to stress and strain. Area to be welded should be cleaned thoroughly. Surface contamination must be removed and bevel or chamfer where required. Maintain close arc length. Vertical joints should be welded from bottom up, using rapid weave technique. Do not whip. Use drag technique to make horizontal fillet welds. Slag is easily removed.
AM Steel-1	Up to 85,000 psi	Up to 60,000 psi	Approx. 25 %	 Low amperage capability makes it excellent for poor fit-up applications and use on low, open circuit voltage buzz boxes. Special coating allows it to weld over extremely dirty, greasy, oil soaked and/or rusty steels. Also can weld over its own slag without causing inclusions or slag interference. It is not necessary to chip slag between passes. Ideal for production, as well as maintenance applications where poor fit-up is encountered. The ability to maintain a stable arc at low amperages also makes it excellent for applications involving light gauge steel. Amsteel-1 easily welds on steel beams and girders that have many coats of paint without developing porosity or defective welds. Welds are also easily made on equipment or machines that are covered with grease and and can't be cleaned before welding. Designed for pipeline welding, tank fabrication, machine and automotive repair, as well as general construction and fabrication. If possible, clean the weld areas as much as is practical. Set the amperage to the specific requirements. If an edge build-up is required or it is thin steel, use the lower end of the amperage range. A close to medium arc gap should be maintained. Slag chipping is recommended, but not necessary on multipass applications.
AM Steel-2	Up to 80,000 psi	Up to 68,000 psi	Approx. 2 %	 High deposition rate. Weld deposits are smooth, ductile, porosity-free and take on a shiny appearance. Weld deposits are impact, abrasion, heat and corrosion resistant. Dissimilar steels, high carbon, tool and die steels, and aircraft steels. Underlayment of hardfacing alloys in mining applications, rebuilding shafts and agitator blades in turbines, frames, cast steel parts and gears. Also perfect to use when the base metal is unknown. Remove as much foreign material as practical from the weld area. DC reverse polarity (electrode +) produces deep penetration; DC straight polarity (electrode -) will have limited penetration and a flatter bead. AC prevents arc blow. A medium arc length should be maintained with either stringer or weave beads. Slag is easily removed with a light chipping hammer.
Chamfer Arc	N/A	N/A	N/A	 High speed cutting electrode for use with all standard arc equipment. No special skills, oxygen tanks, or air compressors are required. Special coating protects the electrode from overheating. Cutting, beveling, and piercing of cast iron, stainless steel, manganese steel, carbon steel, malleable iron, aluminum, copper, bronze, nickel and nickel alloys. Ideal for cleaning out defects and removing rivets. The fastest and cleanest cuts use DC straight polarity (electrode -). When piercing, hold electrode vertical to work, strike arc, and push in and out until hole has been formed. When cutting sheets or plates, start at the edge, strike arc, and use electrode like a saw; push and pull with the electrode at a 45° angle to the work piece. In all cases the arc must be kept as short as possible.
AM Premium Cast-1	Up to 60,000 psi (415 N/mm2)	N/A	N/A	 High-strength alloy for dirty cast iron. Machinable deposits. Specially designed for contaminated, oil-soaked cast iron. Alloyed core wire with unique flux coating produces strong, crack-resistant welds. Joining cast iron to steel, transmission gear housings, gray, ductile & nodular cast iron, sewer pipes.
Cast Weld-1	Up to 50,000 psi (345 N/mm2)	N/A	N/A	Premium high nickel alloy for cast iron. Maximum machinability of deposit and HAZ. Pulsating arc for low temperature welding of cast iron in all positions. Pulsating arc removes impurities resulting in a porosity-free weld deposit. Engine blocks, joining cast iron to steel, gear housings, joining cast iron to stainless steels.



AWS Designation	Tensile Strength	Yield Strength	Elongation	Description, Application & Procedure
Cast Weld-2	Up to 75,000 psi (520 N/mm2)	N/A	N/A	 Maximum strength alloy for cast iron. Special bi-metal core wire prevents overheating of electrode. Soft arc allows for easy machinability of highly crack-resistant weld deposit. Pulsating arc on DC- and AC removes impurities from base material, even on dirty, oily surfaces. Suitable for welding cast iron to steel.
				Cylinder heads, machine bases, ship engine manifolds, filling holes, cast gear teeth, pump housings.
Cast Weld-3	Up to 140,000 psi (965 N/mm2)	Up to 120,000 psi (827 N/mm2)	N/A	Nickel-free electrode with non-machinable deposit. Formulated for dirty and difficult-to-weld cast iron. Suitable for joining problem cast iron to steel. Successfully used when nickel alloys fail to adhere. Burned furnace grates, cracked machine bases, build up of abrasion, pump housings worp areas, low guality cast iron.
Impact Arc	Up to 140,000 psi (965 N/mm2)	Up to 120,000 psi (827 N/mm2)	N/A	 High chromium, high manganese alloy for joining and rebuilding manganese and carbon steel plates. High alloy deposits are very tough and will take extreme impact and abrasion conditions. Has excellent weldability with very low spatter. Operates easily in all positions. Rebuilding and joining austenitic manganese steels and manganese steels to other steel combinations. Especially designed for high impact applications such as rail frogs and switch points, roller crushers, hammers, shovel tracks. Also excellent for use as a base for harder overlays. Remove any hardened or fatigued material from the surface with AFM Chamfer Arc. Deposits may be placed with either the stringer bead or weaving technique. This electrode deposits easily in all positions with excellent build-up quality. Avoid overheating on manganese steel bas metals. Deposits work harden rapidly.
Abrasarc	N/A	N/A	N/A	 General purpose surfacing alloy for surfaces subjected to abrasive wear and impact. Crack resistant deposits, but can be forged. Heavy build-ups are possible without the need for softer cushion layers. Buildup and surfacing of new or worn machine parts of steel, cast steel, and manganese steel, dredger teeth, crusher jaws, hammer mill parts, conveyors, pressure rollers, shovel teeth, stampers, caterpillar drives, and earth borers. Remove all foreign material from weld area. Preheat is not necessary. Maintain a medium arc length making either stringer beads or weave beads. Allow part to cool slowly.
Bronze Arc	Up to 50,000 psi (345 N/mm2)	N/A	30 %	 AC/DC+ Tin/Bronze electrode for joining and surfacing. All position electrode with minimum spatter and easy slag removal. Excellent color match to bronze. Offers good resistance to sea water and other chemicals. Arc brazing galvanized sheets, impellers, defects in new bronze castings, gear wheels
Bronze G	Up to 70,000 psi (483 N/mm2)	N/A	N/A	Super strength, general use brazing rod. Excellent for overlaying & build-up at low temperatures (1400°-1600°F). Excellent for close fitting joints, thin-flowing at high-temperatures (1650°-1750°F). Designed to build-up or join carbon steels, alloy steels, cast iron, and many nonferrous materials. Super active flux promotes ultra-thin flowing of alloy. Gear teeth build-up, attaching carbide cutting tips, build-up of bearing shafts, joining bicycle assemblies, brazing of rusty surface, heavy equipment repair.
Alum Arc	Up to 25,000 psi (173 N/mm2)	N/A	N/A	Universal flux-coated aluminum stick electrode for arc welding or gas welding. Ideal for outdoor use when MIG/TIG welding is not suitable. Exceptional arc stability at low amperages with minimum spatter. Deposits have excellent corrosion resistance and color match. Build-up of castings - Aluminum castings - Repair of machining errors - Tanks & Pipes
Alum Cor	Up to 30,000 psi (207 N/mm2)	N/A	20 %	Unique flux-cored aluminum brazing rod. Excellent for build-up and repair of all weldable grades of aluminum including cast alloys. Designed expecially for dirty applications. Can be applied in all positions using an oxy-fuel torch. Ideal for joining dissimilar sizes and for poor fit-up applications. Cast engine blocks - Oily casting repairs - Aluminum pump housings - Automotive parts



FOR ALL YOUR HAND, CLAMPING, AND PIPING TOOL NEEDS

Quality Standards



Techniweld USA's, Grip Star™

- Clamps **87** Pipe Stands
- Chipping Hammers 88 Hand Tools Magnetic Holders



Grip Star™ Clamps

Features:

- Heavy-Duty Casted C-Clamp
- Copper-Plated spindle for spark protection

Item Number	Style
CC402	C-CLAMP 2"
CC404	C-CLAMP 4"
CC406	C-CLAMP 6"
CC408	C-CLAMP 8"
CC410	C-CLAMP 10"
CC412	C-CLAMP 12"
GSPIPECLAMP125	ULTRA CLAMP, 1-2.5"
GSPIPECLAMP26	ULTRA CLAMP 2-6"
GSPIPECLAMP512	ULTRA CLAMP, 5-12"
GCECR800L	ST-107 ROTARY GROUND CLAMP
TW600B	BATTERY CLAMP BLACK 600/AMP
TW600R	BATTERY CLAMP RED 600/AMP
TW600ST	BATTERY CLAMPS SET RED & BLACK 600/AMP





TW600ST

Grip Star[™] Pipe Stands

Features:

- Fully UPS-able fold up design
- · Heavy-Duty scratch resistant powder coated paint

Heavy-Duty welded design
All parts are compatible with Sumner

· Anti-Slip protection features included in even base models

Item Number	Style	Load Capacity
GSFOLDJACK	FOLDING PIPE STAND WITH CARRY HANDLE	2500 LB
GSFOLDLOW	LOW FOLDING PIPE STAND	2500 LB
GSFOLDROLL	FOLDING STAND W/ ROLLER HEAD	2500 LB
GSLOWJACK	LOW-JACK STATIONARY PIPE STAND	2500 LB
GSLOWJACK & PSVHSS40	BIG VEE (BASIC)	2500 LB
GSPROROLL	TECHNI-JACK 24" HI-BOY STATIONARY ROLLER HEAD PIPE JACK	2000 LB
GSPROROLL & GSROLLERHEAD	HI HEAVY DUTY JACK WITH ROLLER HEAD	2500 LB
GSSHR	HI ADJUST-A-ROLL WITH ALUMINUM ROLLER WHEELS	2500 LB
GSFOLDROLLLOW	LOW, FOLD-A-JACK, ST-982 WITH ROLLER HEAD	2500 LB
GSPROJACK	HI-JACK STATIONARY PIPE STAND	5000 LB
GSVHEAD	STANDARD V-HEAD FOR GSFOLDROLL	-
GSRHEADL	ROLLER HEAD FOR GSPROROLL	-
GSRHEADS	ROLLER HEAD FOR GSFOLDROLL	-
GSROLLERHEAD	ROLLER HEAD WITH STEEL WHEELS	-
GSBALLTRANSFER	BALL TRANSFER HEAD, TWO PER PACKAGE, SOLD AS PAIR	-





GSRHEADS

87



Grip Star[™] Chipping Hammers

Features:

- Ideal for cleaning up excess welding slag build-up
- Manufactured with high carbon steel and engineered to last

1

- Two tools in one! No need to switch between two different tools
- Premium Milled single piece wood handle



Item Number	Style
CHRLA1	CHISEL & BRUSH DUAL TOOL WITH SPRING HANDLE (A-1 STYLE)
CHRLH1S	CONE & CHISEL CHIPPING HAMMER WITH SPRING HANDLE (H STYLE)
CHRLH1C	CONE & CROSS CHIPPING HAMMER WITH SPRING HANDLE (S30 STYLE)
CHRLHWH	CONE & CHISEL CHIPPING HAMMER WITH WOOD HANDLE (WH-20 STYLE)
CHRLHWH10	CHISEL & CROSS CHIPPING HAMMER WITH WOOD HANDLE (WH-10 STYLE)
CHRLHWH30	CONE & CROSS CHIPPING HAMMER WITH WOOD HANDLE (WH-30 STYLE)
CHRLHWH40	CURVED CONE & CROSS CHIPPING HAMMER WITH WOOD HANDLE (WH-40 STYLE)



CHRLHWH

Grip Star™ Hand Tools

Item Number	Style
GSMIGWELPERS	WELPER STYLE PLIERS
TEC46077	AUTO LOADING UTILITY KNIFE
TEC56027	4/PCS LOCKING PLIERS SET
TEC57080	4 PIECE GROOVE JOINT PLIERS SET
TEC57075	12" TONGUE & GROOVE JOINT PLIERS
TEC57455	9-1/2 CABLE CUTTER
TEC87112	12 ADJ WRENCH W/BLACK OXIDE FINISH
RTP5	#5 B & MC WRENCH
RTP10	10 STRAIGHT COMMERCIAL ACETYLENE WRENCH
RTP1013	10 WAY WRENCH
RTP250T	T-HANDLE WRENCH POL ACETYLENE 1/4
RTP20	T-HANDLE WRENCH POL ACETYLENE 3/8
TECWG11	WG-11 FILLET WELD GAUGE
TECWG8	WG-8 WELD GAUGE CAM TYPE





RTP20

Grip Star™ MAGHOLDERS

Item Number	Style
MAGHOLDERS	GRIP STAR MAGNETIC HOLDER SMALL (2.5 INCH)
MAGHOLDERM	GRIP STAR MAGNETIC HOLDER MEDIUM (3 INCH)
MAGHOLDERL	GRIP STAR MAGNETIC HOLDER LARGE (3.5 INCH)
MAGHOLDERXL	GRIP STAR MAGNETIC HOLDER EXTRA LARGE (5 INCH)





FOR ALL YOUR MIG GUNS, PARTS, AND ACCESSORIES

Quality Standards

- All MIG Star[™] Guns are rigorously tested using computerized and automated test equipment at the design stage and throughout the entire production process.
- All of our components pass rigorous quality control checks prior to assembly.
- Our extensive range of Front End Consumables are manufactured to the highest specification.
- All MIG Star[™] Guns are designed to be tough and damage resistant and comply with EN60974-7.



Features & Benefits 90

Air Cooled MIG Welding Gun

- MIG Star[™] No. 2 91-92
- MIG Star[™] No. 4 93-94

MIG Star™ Accessories

- MIG Star[™] Nozzles **95-96**
- MIG Star[™] Liner Selector Chart **96**
 - MIG Star[™] Gas Diffusers 97
 - MIG Star[™] Holder 97
 - MIG Star[™] Alternative Ends 98

MIG Star[™]Gun - Features & Benefits

Tweco®, Miller®, Lincoln®, Euro-kwik® compatible

NEW Ergonomic Handle

- Maximizes user comfort
- Ergonomic design for balance and strength
- Enhances wire feeding performance

Swan Necks

- A copper core provides excellent heat dissipation
- Stainless Steel Outer Jacket
- Durable and Robust

Contact Tips

 Manufactured using a harder and higher conductivity copper alloy for industry leading durability

Hanger Hooks

- Easy to store
- Less prone to damage
- Encourages an efficient and tidy workspace

Cable Supports

- Improved wire feed
- The perfect balance of freedom of movement and progressive support to the power cable is achieved.

Hyperflex[™] Cable Systems

Knuckle Joint

Improved maneuverability

Provides enhanced flexibility

the cable assembly

Prolongs cable life

Small movements of the handle and

neck are possible independently of

- Air cooled cable assemblies offer outstanding flexibility and the highest heat and abrasion resistance of any known cable.
- Cable end crimp systems ensure maximum conductivity while the outer jacket is constructed from cross linked polymers providing a tear proof jacket and a burn threshold of 707°F.

Nozzles

- Maximize performance
- Manufactured from copper to
 enhance heat dissipation
- Adjustable tip recess
- Manufactured to exacting specifications

Gun Plug Bodies

- Spring loaded pins
- Guaranteed gas seals

Machine End Systems

- Extra length cable support systems
- Smooth and consistent wire feed
- Simple snap fits



MIG Star[™] - No. 2

Air Cooled MIG Welding Gun

Rating: 200A CO₂, 150A Mixed Gas @ 60% Duty Cycle EN60974-7 0.0239 - .0459/0.6mm to 1.2mm wires

TWECO[®] compatible

Mo	Nodel						
	Item Number						
	15ft. 25ft.		Model Description				
	MSM20015	MSM20025	Tweco® Style No. 2 Miller End				

No	Nozzles							
	Item Number	Description	Bore	Bore				
Α.	MS2250	Nozzle Adjustable	1/2	13mm				
	MS2262	Nozzle Adjustable	5/8	16mm				
В.	MS24CT62S	Nozzle Fixed Coarse Thread	5/8	16mm				
C.	MS2350	Nozzle Self Insulated	1/2	13mm				
	MS2362	Nozzle Self Insulated	5/8	16mm				
	MS2375	Nozzle Self Insulated	3/4	19mm				

MIG Star™ - No. 2 Air Cooled MIG Welding Gun

Rating: 200A CO₂, 150A Mixed Gas @ 60% Duty Cycle EN60974-7 0.0239 - .0459/0.6mm to 1.2mm wires

TWECO[®] compatible



Lin	Liners							
	Item Number	Description	Length	Wire Size				
F.	MS42303515	Liner Conduit	15ft.	.030035	0.8 - 0.9mm			
	MS42404515	Liner Conduit	15ft.	.040045	1.0 - 1.2mm			
	MS42N354515	Liner Conduit	15ft.	0.30035	0.8 - 0.9mm			

Contact Tips				Сс	Components			
	Item Number	Description	Wir	e Size	Material		Item Number	Description
D.	MS1423	Contact Tip	.023	0.6mm	ECu	1.	MS32	Adjustable Nozzle Insulator
	MS1430	Contact Tip	.030	0.8mm	ECu	2.	MS34CT	Nozzle Insulator Coarse Thread (24CT)
	MS1435	Contact Tip	.035	0.9mm	ECu	3.	MS52	Gas Diffuser
	MS1445	Contact Tip	.045	1.2mm	ECu	4.	MS52FN	Gas Diffuser for Coarse Thread Nozzle
E.	MS14H35	Contact Tip	.035	0.9mm	ECu HD		MS62J45	45° Conductor Tube
	MS14H45	Contact Tip	.045	1.2mm	ECu HD	5.	MS62J60	60° Conductor Tube
			11.	MS82HK	Handle Kit c/w Screws and Support			
							MS92	Trigger Switch



MIG Star[™] - No. 4

Air Cooled MIG Welding Gun

Rating: 400A CO₂ 350A mixed gas @ 60% Duty Cycle EN60974-7 0.0309-5/649/0.8mm-2.0mm wires

TWECO[®] compatible

Moo	Model						
	Item Number						
	15ft.	25ft.	Model Description				
	MSM40015	MSM40025	Tweco [®] Style No. 4 Miller End				

No	Nozzles							
	Item Number	Description	Bore	Bore				
Α.	MS24A50	Nozzle Adjustable	1/2	13mm				
	MS24A62	Nozzle Adjustable	5/8	16mm				
В.	MS24CT62S	Nozzle Fixed Coarse Thread	5/8	16mm				
	MS24AH62	Nozzle Self Insulated	5/8	16mm				
C.	MS24AH75	Nozzle Self Insulated	3/4	19mm				

Со	Contact Tips							
	Item Number	Description	Description Wir		Material			
D.	MS1445	Contact Tip	.045	1.2mm	ECu			
	MS1452	Contact Tip	.052	1.3mm	ECu			
E.	MS14H35	Contact Tip	.035	1.0mm	ECu			
	MS14H45	Contact Tip	.045	1.2mm	ECu HD			
	MS14H52	Contact Tip	.052	1.3mm	ECu HD			
	MS14H116	Contact Tip	1/16	1.6mm	ECu HD			
	MS14H564	Contact Tip	5/64	2.0mm	ECu HD			

MIG Star[™] - No. 4 Air Cooled MIG Welding Gun



Lin	Liners							
	Item Number	Description	Length	Wire Size				
F.	MS44354515	Liner Conduit	15ft.	.030045	0.9mm - 1.2mm			
	MS4411615	Liner Conduit	15ft.	1/16	1.6mm			
	MS4456415	Liner Conduit	15ft.	5/64	2.0mm			
	MS44N354515	Nylon Conduit	15ft.	.045	1.2mm			
	MS44N11615	Nylon Conduit	15ft.	1/16	1.6mm			

Cor	Components				
	Item Number	Description			
1.	MS34A*	Adjustable Nozzle Insulator			
2.	MS34CT	Nozzle Insulator Coarse Thread			
3.	MS54A	Gas Diffuser			
4.	MS64J45	45° Conductor Tube			
	MS64J60	60° Conductor Tube			
10.	MS84HK	Handle Kit c/w Screws and Support			
11.	MS94R	Trigger Switch			
14.	MST1522	Cable Terminal Male			
15.	MST1542	Lock Nut			
16.	MST8026	Spring Cable Support			
17.	MSX6RC	Gun Plug Housing c/w Nut			



MIG Star[™] Nozzles



	Item Number	Description	Bore	Bore	Model
Α.	MS2137	Nozzle Self Insulated	1/2	13mm	PA No. 1
	MS2150	Nozzle Self Insulated	5/8	16mm	PA No. 1
	MS2162	Nozzle Self Insulated	3/4	19mm	PA No. 1

	Item Number	Description	Bore	Bore	Model
В.	MS2250	Nozzle Adjustable	1/2	13mm	PA No. 2
В.	MS2262	Nozzle Adjustable	5/8	16mm	PA No. 2

	Item Number	Description	Bore	Bore	Model
C.	MS2350	Nozzle Self Insulated	1/2	13mm	PA No. 2/3
	MS2362	Nozzle Self Insulated	5/8	16mm	PA No. 2/3
	MS2375	Nozzle Self Insulated	3/4	19mm	PA No. 2/3

	Item Number	Description	Bore	Bore	Model
D.	MS24A50	Nozzle Adjustable	1/2	13mm	PA No. 3/4
	MS24A62	Nozzle Adjustable	5/8	16mm	PA No. 3/4
	MS24A75	Nozzle Adjustable	3/4	19mm	PA No. 3/4
E.	MS24A62SS	Nozzle Short Stop	5/8	16mm	PA No. 3/4

	Item Number	Description	Bore	Bore	Model
G.	MS24AH62	Nozzle Adjustable	5/8	16mm	PA No. 4
		(Heavy Duty)			

	Item Number	Description	Bore	Bore	Model
Н.	MS24CT62S	Fixed Nozzle Coarse Thread	1/2	16mm	PA No. 2/3/4
l.	MS34CT	Nozzle Insulator Coarse Thread			PA No. 2/3/4

MIG Star[™] Contact Tips

Α.		Item Number	Description	W	ire Size	Material	Model
1" / 25mm	Α.	MS1123	Contact Tip	.023	0.6mm	ECu	PA No. 1
		MS1130	Contact Tip	.030	0.8mm	ECu	PA No. 1
un de la companya de		MS1135	Contact Tip	.035	0.9mm	ECu	PA No. 1
		MS1145	Contact Tip	.045	1.2mm	ECu	PA No. 1
В.		Item Number	Description	W	'ire Size	Material	Model
11%" / 38mm	В.	MS1423	Contact Tip	.023	0.6mm	ECu	PA No. 2/3/4
ц.		MS1430	Contact Tip	.030	0.8mm	ECu	PA No. 2/3/4
490 March 199		MS1435	Contact Tip	.035	0.9mm	ECu	PA No. 2/3/4
· · · · · · · · · · · · · · · · · · ·		MS1445	Contact Tip	.045	1.2mm	ECu	PA No. 2/3/4
		MS1452	Contact Tip	.052	1.3mm	ECu	PA No. 2/3/4
\mathbf{C}	_						
С.		Item Number	Description		Wire Siz	ze Mate	erial Model
C.	C.	Item Number MS14H35	Description Heavy Duty Contact	: Tip	Wire Si: .035 0.9	ze Mate	erial Model PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45	Description Heavy Duty Contact Heavy Duty Contact	Tip	Wire Siz .035 0.9 .045 1.2	ze Mate Omm ECu mm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact	Tip Tip	Wire Si: .035 0.9 .045 1.2 .052 1.3	ze Mate Omm ECu mm ECu mm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact	Tip : Tip : Tip : Tip :	Wire Siz .035 0.9 .045 1.2 .052 1.3 1/16 1.6	ze Mata Omm ECu mm ECu mm ECu mm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact	Tip Tip Tip Tip Tip	Wire Si: .035 0.9 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0	ze Mata Omm ECu mm ECu mm ECu mm ECu Omm ECu	Model PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact	Tip Tip Tip Tip Tip	Wire Si: .035 0.5 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0	ze Mate Dmm ECu mm ECu mm ECu mm ECu Dmm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564 Item Number	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Description	Tip Tip Tip Tip Tip	Wire Si: .035 0.5 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0	ze Mata Dmm ECu mm ECu mm ECu mm ECu Dmm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564 Item Number MS14T35	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Description Tapered Contact Tip	: Tip : . : Tip : . : Tip : . : Tip : . : Tip : .	Wire Si: .035 0.9 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0 Wire Si: .035 0.35	ze Mate Dmm ECu mm ECu mm ECu mm ECu Dmm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 erial Model PA No. 2/3/4
C.	C. D.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564 Item Number MS14T35 MS14T45	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Description Tapered Contact Tip Tapered Contact Tip	: Tip :	Wire Si: .035 0.5 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0 Wire Si: .035 0.5 .035 1.2	ze Mata mm ECu mm ECu mm ECu mm ECu 0mm ECu 2e Mata 0mm ECu mm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 PA No. 2/3/4 erial Model PA No. 2/3/4 PA No. 2/3/4
C.	C. D.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564 Item Number MS14T35 MS14T45 MS14T52	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Description Tapered Contact Tip Tapered Contact Tip	Tip . Tip . Tip . Tip . Tip . Tip .	Wire Si: .035 0.9 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0 Wire Si: .035 0.5 .045 1.2	ze Mate Dmm ECu mm ECu mm ECu mm ECu Dmm ECu Dmm ECu mm ECu mm ECu	Model PA No. 2/3/4 PA No. 2/3/4
C.	C.	Item Number MS14H35 MS14H45 MS14H52 MS14H116 MS14H564 Item Number MS14T35 MS14T35 MS14T52 MS14T52 MS14T116	Description Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Heavy Duty Contact Description Tapered Contact Tip Tapered Contact Tip Tapered Contact Tip	Tip : Tip : Tip : Tip : Tip :	Wire Size .035 0.5 .045 1.2 .052 1.3 1/16 1.6 5/64 2.0 Wire Size .035 0.9 .045 1.2 .035 0.5 .045 1.2 .052 1.3 1/16 1.6	ze Mate mm ECu mm ECu mm ECu mm ECu 0mm ECu 0mm ECu mm ECu mm ECu mm ECu	erial Model PA No. 2/3/4 PA No. 2/3/4

MIG Star™ - Liner Selector Chart

	Item Number	Description	Length	Wi	re Size	FA No. 2	FA No. 4
Α.	MS42303515	Steel Liner, Brass Nipple	15ft.	.030035	0.8mm - 0.9mm	m	М
Α.	MS42N354515	Nylon Liner, Brass Nipple	15ft.	.030035	0.8mm - 0.9mm	m	М
Α.	MS42404515	Steel Liner, Brass Nipple	15ft.	.040045	1.0mm - 1.2mm	m	М
Α.	MS44354515	Steel Liner, Brass Nipple	15ft.	.035045	0.9mm - 1.2mm		m
	MS44354525	Steel Liner, Brass Nipple	25ft.	.035045	0.9mm - 1.2mm		m
Α.	MS4411615	Steel Liner, Brass Nipple	15ft.	1/16	1.6mm		m
	MS4411625	Steel Liner, Brass Nipple	25ft.	1/16	1.6mm		m



m Solid Box = Recommended Liner M Clear Box = Compatible Liner

All liners come with brass nipples as standard.



MIG Star[™]- Gas Diffusers

TWECO[®] compatible



Contact Tips						
	Item Number	Description	Tip Thread	Wire	Model	
Α.	MS51	Gas Diffuser	M6		PA No. 1	

	Item Number	Description	Tip Thread	Wire	Model
В.	MS52	Gas Diffuser	1/4UNF		PA No. 2

	Item Number	Description	Tip Thread	Wire	Model
C.	MS52FN	Gas Diffuser	1/4UNF		PA No. 2

	Item Number	Description	Tip Thread	Wire	Model
D.	MS54A	Gas Diffuser	1/4UNF		PA No. 3,4

	Item Number	Description	Tip Thread	Wire	Model
E.	MS55SW	Gas Diffuser	5/16UNF	5/64/2.0mm	PA No. 5

MIG Star[™] Holder

Item Number	Description
	Magnetic base
	Keeps your MIG gun secure when not in use
MSMIGHOLDER	Works in vertical and horizontal positions
	Durable enamel finish with zinc coated base



MIG Star[™] - Alternative Ends

TWECO[®] compatible



TWECO[®] 4/NAS CONNECTOR - AIR COOLED

Description

North American Standard connection (same size as Tweco 4). 6.4mm Blade recepticle connection for trigger.

Model					
A.	Item Number				
	15ft.	25ft.	Model Description	Amperage	
	MST20015		Tweco® Style No. 2 Tweco® End	200 Amp	
	MST40015	MST40025	Tweco® Style No. 4 Tweco® End	400 Amp	

MILLER® CONNECTOR - AIR COOLED

B. Description

Miller[®] Style power pin with a Miller[®] 2 pin plug for trigger.

Мо	del			
В.	Item Number			
	15ft.	25ft.	Model Description	Amperage
	MSM20015	MSM20025	Tweco® Style No. 2 Miller® End	200 Amp
	MSM40015	MSM40025	Tweco [®] Style No. 4 Miller [®] End	400 Amp

C.

Β.





LINCOLN® SEPARATE GAS CONNECTOR

C. Description

Configurator for Lincoln[®] machines with separate gas connection. Lincoln[®] 2 pin plug for trigger.

Model			
C.	Item Number		
	15ft.	Model Description	Amperage
	MSL20015	Tweco [®] Style No. 2 Lincoln [®] End	200 Amp
	MSL40015	Tweco [®] Style No. 4 Lincoln [®] End	400 Amp

LINCOLN® L3 STYLE D. Description Lincoln® Style power pin with a Miller® 2 pin plug for trigger.

Model			
D.	Item Number		
	15ft.	Model Description	Amperage
	MSL20015N	Tweco® Style No. 2 Lincoln L3® End	200 Amp
	MSL40015N	Tweco® Style No. 4 Lincoln L3® End	400 Amp



FOR ALL YOUR WELDING ABRASIVE NEEDS

Quality Standards

Techniweld USA's, Sand Star™



Stringer Beads 100 Twist Knot Wheels Cup Brushes

Crimped End Brushes 101 Hand Brushes Files

WWW.TECHNIWELDUSA.COM



STRINGER BEADS									
Part Number	Diameter	Wire Size	Arbor Hole or Nut	No. of Knots	Trim Length	Face Width	Max RPM	Carbon Steel or Stainless	Standard Pack
*SS4WS075	4"	.020"	5/8"–11 Nut	30	7/8"	5/16"	20,000	Carbon Steel	12
*SS4WS075SS	4"	.020"	5/8"-11 Nut	30	7/8"	5/16"	20,000	Stainless	12
*SS6WS1	6"	.020"	5/8"–11 Nut	48	1-1/4"	5/16"	12,000	Carbon Steel	10
*SS6WS1SS	6"	.020"	5/8"–11 Nut	48	1-1/4"	5/16"	20,000	Stainless	10
SS7WS15	7"	.020"	5/8"–11 Nut	48	1-1/2"	5/16"	9,000	Carbon Steel	10

TWIST KNOT WHEELS										
Part Number	Diameter	Wire Size	Arbor Hole or Nut	No. of Knots	Trim Length	Face Width	Max RPM	Carbon Steel or Stainless	Standard Pack	
SS4WK625	4"	.014"	5/8"-11 Nut	20	3/4"	1/2"	20,000	Carbon Steel	10	
SS4WK625SS	4"	.014"	5/8"-11 Nut	20	3/4"	1/2"	20,000	Stainless	10	
SS4WK625SS020	4"	.020"	5/8"-11 Nut	20	3/4"	1/2"	20,000	Stainless	10	

CUP BRUSHES								
Part Number	Diameter	Wire Size	Arbor Hole or Nut	No. of Knots	Trim Length	Max RPM	Carbon Steel or Stainless	Standard Pack
*SS275CK1	2-3/4"	.020"	5/8"-11 Nut	20	1"	14,000	Carbon Steel	6
SS3CK875	3"	.020"	5/8"-11 Nut	20	7/8"	12,500	Carbon Steel	6
SS4CK125	4"	.020"	5/8"-11 Nut	20	1-1/8"	9,000	Carbon Steel	10

*Product Made in USA

SAND ST*R





	CRIMPED END BRUSHES									
Part Number	Diameter	Wire Size	Stem Size	Trim Length	Max RPM	Carbon Steel or Stainless	Standard Pack			
SS05EC1	1/2"	.014"	1/4"	1"	20,000	Carbon Steel	75			
SS05EC1SS	1/2"	.014"	1/4"	1"	20,000	Stainless	75			
SS075CC875	3/4"	.014"	1/4"	7/8"	20,000	Carbon Steel	50			
SS075CC875SS	3/4"	.014"	1/4"	7/8"	20,000	Stainless	50			
SSICC1	1"	.014"	1/4"	1"	20,000	Carbon Steel	35			

HAND BRUSHES						
Part Number	Part Number Description					
SS85045	SS85045 3 x 19 Carbon Steel scratch brush, 13-1/4 x 7/8					
SS85047	SS850473 x 19 Stainless Steel scratch brush, 13-1/4 x 7/8					
SS85051	\$\$85051 4 x 16 Carbon Steel scratch brush, shoe handled					
SS85053	4 x 16 Stainless Steel scratch brush, shoe handled	12				
SS85055	3 x 7 Stainless Steel toothbrush, wooden handled	25				
SS85056	3 x 7 Brass toothbrush, wooden handled	25				

FILES						
Part Number	Description	Standard Pack				
SS14HRB	Premium 14" Half Round Bastard File	1				

ITIG STARI

FOR ALL YOUR TIG TORCHES, **PARTS, AND ACCESSORIES**

Quality Standards

- All torches are rigorously tested using computerized and automated test equipment at the design stage and throughout the entire production process.
- All our components pass rigorous quality control checks prior to assembly.
- Our extensive range of Front End Consumables are manufactured to the highest specification.
- All torches are designed to be tough, damage resistant, and comply with EN60974-7.



103	Features & Benefits
104-106	Air Cooled TIG Welding Torches TIG Star™ 9 & Consumables
107-109	TIG Star [™] 17 & Consumables
110-112	TIG Star™ 26 & Consumables
113-115	Water Cooled TIG Welding Torches TIG Star™ 18 & Consumables
116-118	TIG Star™ 20 & Consumables
118	TIG Star™ Accessories TIG Star [™] Torch Holder
119-120	Tungsten Electrodes
121-123	Tungsten Electrode Guide

102



TIG Star[™] - Torch Features & Benefits

Weldcraft® Compatible



Trigger Switches

• A range of switch styles and options are available that allow for remote arc control.

Handles and Boots

- Redesigned for improved grip.
- An additional high grip snap on boot enables rapid servicing and a reduction in downtime.

Torch Heads

- Lightweight and durable
- Manufactured with high-temperature resistant silicone rubber insulation.
- All copper components ensure cooler running temperatures and maximum current capacity.

Cable System

 Air and liquid cooled cable assemblies use high-temperature resistant rubber jackets which combine outstanding flexibility and resistance to high heat and abrasion.

Front End Consumables

- Extensive range
- Front End Consumables are manufactured to the highest specification.



TIG Star™9

Air Cooled TIG Welding Torch Rating: 125A DC, 100A AC @ 60% Duty Cycle EN60974-7 0.0209 TO 3/329/0.5mm-2.4mm Electrodes

Weldcraft[®] compatible

h ycle mm Electrodes

TIG Torches

Description	Item Number			
Description	12ft (3.8m)	25ft (7.6m)		
TIG Welding Torch with Flexi Head 2 Piece Power Cable	-	TS9F252		
TIG Welding Torch with Flexi Head Valve with Rubber Cable	TS9FV12R	TS9FV25R		
TIG Welding Torch with Flexi Head Valve, 2 Piece Power Cable	-	TS9FV252		
TIG Welding Torch with Valve with Rubber Cable	-	TS9V25R		
TIG Welding Torch with Valve, 2 Piece Power Cable	TS9V122	TS9V252		

Alternative Torch Bodies

Rating: 125A DC, 100A AC .020" to 3/32" (0.5mm-2.4mm) electrode.





TS9V



TS9FV



104





TIG Star™9 Air Cooled TIG Welding Torch

Components

	Item Number	Description		Item Number	Description
1	TS598882	Cup Gasket		TS57Y01R	Power Cable x 12.5ft (3.8m) Rubber
2	TS54N6320	Insulator Large Diameter Gas Lens	14	TS57Y03R	Power Cable x 25ft (7.6m) Rubber
3	TS9	Torch Body including Cup Gasket		TS57Y032	Power Cable x 25ft (7.6m) 2 Piece
5	TS41V24	Back Cap Long	15	TS9V	Torch Body with Valve
6	TS41V35	Back Cap Medium	16	TSVS2	Valve Stem
7	TS41V33	Back Cap Short	17	TS9F	Torch Body Flexi Head
8	TS950	Microswitch Bulbous	NI	TS9FV	Torch Body Flexi Head with Valve
11	TS105Z55	Handle			

NI - Not Illustrated

Consumables

	Collet				
	Item Number	Description			
	TS13N20 Collet .020" (0.5mm) Bore				
	TS13N21 Collet .040" (1.0mm) Bore				
A	TS13N22	Collet 1/16" (1.6mm) Bore			
	TS13N23	Collet 3/32" (2.4mm) Bore			

	Collet Body				
	Item Number	Description			
	TS13N25 Collet Body .020" (0.5mm) Bore				
	TS13N26	Collet Body .040" (1.0mm) Bore			
В	TS13N27	Collet Body1/16" (1.6mm) Bore			
	TS13N27M	Collet Body 5/64" (2.0mm) Bore			
	TS13N28	Collet Body 3/32" (2.4mm) Bore			

	Ceramic Cup				
	Item Number	Description			
	TS13N08	#3-4 Ceramic Cup 1/4" (6mm) Bore			
	TS13N09	#5 Ceramic Cup 5/16" (8mm) Bore			
	TS13N10	#6 Ceramic Cup 3/8" (10mm) Bore			
	TS13N11	#7 Ceramic Cup 7/16" (11mm) Bore			
	TS13N12	# 8 Ceramic Cup 1/2" (13mm) Bore			
	TS13N13	# 10 Ceramic Cup 5/8" (16mm) Bore			

Long Ceramic Cup			
Item Number Description			
D	TS796F72	#5 Long Ceramic Cup 5/16" (8mm) Bore	
	TS796F73	#6 Long Ceramic Cup 3/8" (10mm) Bore	

Extra Long Ceramic Cup				
	Item Number Description			
Е	TS796F77	#6 Extra Long Ceramic Cup 3/8" (10mm) Bore		

Gas Lens Body			
	Item Number	Description	
_	TS45V42	Gas Lens Body 0.40" (1.0mm) Bore	
F	TS45V43	Gas Lens Body 1/16" (1.6mm) Bore	

	Gas Lens Cup				
Item Number Description					
G	TS53N58	#4 Gas Lens Cup 1/4" (6mm) Bore			
	TS53N59	#5 Gas Lens Cup 5/16" (8mm) Bore			
	TS53N60	#6 Gas Lens Cup 3/8" (10mm) Bore			
	TS53N61	#7 Gas Lens Cup 7/16" (11mm) Bore			
	TS53N61S	#1S Gas Lens Cup 1/2" (13mm) Bore			

	Large Diameter Gas Lens Collet				
Item Number Description					
н	TS13N22L	Large Diameter Gas Lens Collet 1/16" (1.6mm) Bore			
	TS13N23L	Large Diameter Gas Lens Collet 3/32" (2.4mm) Bore			

	Large Diameter Gas Lens Body			
	Item Number Description			
I	TS45V116S	Large Diameter Gas Lens Body 1/16" (1.6mm) Bore		
	TS45V64S	Large Diameter Gas Lens Body 3/32" (2.4mm) Bore		

	Large Diameter Gas Lens Cup				
Item Number Description					
J	TS57N75	#6 Large Diameter Gas Lens Cup 3/8" (10mm) Bore			
	TS57N74	/N74 #8 Large Diameter Gas Lens Cup 1/2" (13mm) Bore			
	TS53N88	#10 Large Diameter Gas Lens Cup 5/8" (16mm) Bore			
	TS53N87	#12 Large Diameter Gas Lens Cup 3/4" (19mm) Bore			



TIG Star™17 Air Cooled TIG Welding Torch

Rating: 150A DC, 115A AC @ 60% Duty Cycle EN60974-7 0.0209 TO 1/89/0.5mm-3.2mm Electrodes Weldcraft[®] compatible



Description	Item Number		
Description	12ft (3.8m)	25ft (7.6m)	
TIG Welding Torch with Vinyl Power Cable	-	TS1725	
TIG Welding Torch with Rubber Cable	TS1712R	TS1725R	
TIG Welding Torch with 2 Piece Power Cable	_	TS17252	
TIG Welding Torch with Flexi Head with Rubber Cable	TS17F12R	TS17F25R	
TIG Welding Torch with Flexi Head Valve with Rubber Cable	TS17FV12R	TS17FV25R	
TIG Welding Torch with Flexi Head Valve, 2 Piece Power Cable	-	TS17FV252	
TIG Welding Torch with Valve with Rubber Cable	TS17V12R	TS17V25R	
TIG Welding Torch with Valve, 2 Piece Power Cable	TS17V122	TS17V252	

Alternative Torch Bodies

Rating: 150A DC, 115A AC .020" TO 3/32" (0.5mm-2.4mm) electrode.









TS17FV



107



TIG Star™17 Air Cooled TIG Welding Torch

Components

	Item Number	Description		Item Number	Description
1	TS18CG	Cup Gasket	13	TS105Z55	Handle
2	TS18CG20	Cup Gasket for Stubby Collet Body		TS57Y01R	Power Cable x 12.5ft (3.8m) Rubber
3	TS54N01	Gas Lens Insulator	15	TS57Y03R	Power Cable x 25ft (7.6m) Rubber
4	TS54N63	Insulator Large Diameter Gas Lens		TS57Y032	Power Cable x 25ft (7.6m) 2 Piece
5	TS17	Torch Body including Cup Gasket	16	TS17V	Torch Body with Valve
6	TS98W18	Back Cap O' Ring	17	TSVS2	Valve Stem
7	TS57Y02	Back Cap Long	18	TS17F	Torch Body Flexi Head
8	TS57Y04	Back Cap Short	19	TS17FV	Torch Body Flexi Head with Valve
9	TS950	Microswitch Bulbous			

NI - Not Illustrated


Consumables

	Collet		
	Item Number	Description	
	TS10N21	Collet .020" (0.5mm) Bore	
	TS10N22	Collet .040" (1.0mm) Bore	
	TS10N23	Collet 1/16" (1.6mm) Bore	
A	TS10N24	Collet 3/32" (2.4mm) Bore	
	TS10N25	Collet 1/8" (3.2mm) Bore	
	TS54N20	Collet 5/32" (4.0mm) Bore	

	Collet Body		
	Item Number	Description	
	TS10N29	Collet Body .020" (0.5mm) Bore	
	TS10N30	Collet Body .040" (1.0mm) Bore	
	TS10N31	Collet Body1/16" (1.6mm) Bore	
P	TS10N32	Collet Body 3/32" (2.4mm) Bore	
	TS10N28	Collet Body 1/8" (3.2mm) Bore	
	TS406488	Collet Body 5/32" (4.0mm) Bore	

	Ceramic Cup		
	Item Number	Description	
С	TS10N50	#4 Ceramic Cup 1/4" (6mm) Bore	
	TS10N49	#5 Ceramic Cup 5/16" (8mm) Bore	
	TS10N48	#6 Ceramic Cup 3/8" (10mm) Bore	
	TS10N47	#7 Ceramic Cup 7/16" (11mm) Bore	
	TS10N46	# 8 Ceramic Cup 1/2" (13mm) Bore	
	TS10N45	#10 Ceramic Cup 5/8" (16mm) Bore	
	TS10N44	#12 Ceramic Cup 3/4" (19mm) Bore	

	Gas Lens Body		
	Item Number	Description	
	TS45V24	Gas Lens Body 0.40" (1.0mm) Bore	
	TS45V25	Gas Lens Body 1/16" (1.6mm) Bore	
	TS45V26	Gas Lens Body 3/32" (2.4mm) Bore	
	TS45V27	Gas Lens Body 1/8" (3.2mm) Bore	

	Gas Lens Cup		
	Item Number	Description	
	TS54N18	#4 Gas Lens Cup 1/4" (6mm) Bore	
	TS54N17	#5 Gas Lens Cup 5/16" (8mm) Bore	
	TS54N16	#6 Gas Lens Cup 3/8" (10mm) Bore	
	TS54N15	#7 Gas Lens Cup 7/16" (11mm) Bore	
	TS54N14	#8 Gas Lens Cup 1/2" (13mm) Bore	
	TS54N19	#11 Gas Lens Cup 11/16" (17mm) Bore	

Long Gas Lens Cup		
	Item Number	Description
J	TS54N17L	#5L Long Gas Lens Cup 5/16" (8mm) Bore
	TS54N16L	#6L Long Gas Lens Cup 3/8" (10mm) Bore
	TS54N15L	#7L Long Gas Lens Cup 7/16" (11mm) Bore

Long Ceramic Cup		
	Item Number	Description
D	TS10N49L	#5 Long Ceramic Cup 5/16" (8mm) Bore
	TS10N48L	#6 Long Ceramic Cup 3/8" (10mm) Bore
	TS10N47L	#7 Long Ceramic Cup 7/16" (11mm) Bore

	Stubby Collet		
	Item Number	Description	
E	TS10N22S	Stubby Collet .040" (1.0mm) Bore	
	TS10N23S	Stubby Collet 1/16" (1.6mm) Bore	
	TS10N24S	Stubby Collet 3/32" (2.4mm) Bore	
	TS10N25S	Stubby Collet 1/8" (3.2mm) Bore	

	Stubby Collet Body		
	Item Number	Description	
F	TS17CB20	Stubby Collet Body 0.20"-1/8" (0.5-3.2mm) Bore	

	Ceramic Cup		
	Item Number	Description	
G	TS13N08	#4 Ceramic Cup 1/4" (6mm) Bore	
	TS13N09	#5 Ceramic Cup 5/16" (8mm) Bore	
	TS13N10	\$6 Ceramic Cup 3/8" (10mm) Bore	
	TS13N11	#7 Ceramic Cup 7/16" (11mm) Bore	
	TS13N12	#8 Ceramic Cup 1/2" (13mm) Bore	
	TS13N13	#10 Ceramic Cup 5/8" (16mm) Bore	

Large Diameter Gas Lens Body		
	Item Number	Description
к	TS45V116	Large Diameter Gas Lens Body 1/16" (1.6mm) Bore
	TS45V64	Large Diameter Gas Lens Body 3/32" (2.4mm) Bore
	TS995795	Large Diameter Gas Lens Body 1/8" (3.2mm) Bore

	Large Diameter Gas Lens Cup		
	Item Number	Description	
L	TS57N75	#6 Large Diameter Gas Lens Cup 3/8" (10mm) Bore	
	TS57N74	#8 Large Diameter Gas Lens Cup 1/2" (13mm) Bore	
	TS53N88	#10 Large Diameter Gas Lens Cup 5/8" (16mm) Bore	
	TS53N87	#12 Large Diameter Gas Lens Cup 3/4" (19mm) Bore	

TECHNIWELDUSA

TIG Star™26

Air Cooled TIG Welding Torch

Rating: 200A DC, 150A AC @ 60% Duty Cycle EN60974-7 0.0209 TO 5/329/0.5mm-4.0mm Electrodes Weldcraft® compatible



TIG Torches

Description	Item Number		
Description	12ft (3.8m)	25ft (7.6m)	
TIG Welding Torch with Rubber Cable	TS2612R	TS2625R	
TIG Welding Torch with 2 Piece Power Cable	-	TS26252	
TIG Welding Torch with Flexi Head with Rubber Cable	-	TS26F25R	
TIG Welding Torch with Flexi Head Valve with Rubber Cable	TS26FV12R	TS26FV25R	
TIG Welding Torch with Flexi Head Valve, 2 Piece Power Cable	TS26FV122	TS26FV252	
TIG Welding Torch with Valve with Rubber Cable	TS26V12R	TS26V25R	
TIG Welding Torch with Valve, 2 Piece Power Cable	_	TS26V252	

Alternative Torch Bodies

Rating: 200A DC, 150A AC .020" to 1/8" (0.5mm-3.2mm) electrode.

TS26

110









TS26FV







TIG Star™26 Air Cooled TIG Welding Torch

Components

	Item Number	Description		Item Number	Description
1	TS18CG	Cup Gasket	9	TS950	Microswitch Bulbous
2	TS18CG20	Cup Gasket for Stubby Collet Body	13	TS10N15	Handle
3	TS54N01	Gas Lens Insulator		TS46V28R	Power Cable x 12.5ft (3.8m) Rubber
4	TS54N63	Insulator Large Diameter Gas Lens	15	TS46V30R	Power Cable x 25ft (7.6m) Rubber
5	TS26	Torch Body including Cup Gasket		TS46V302	Power Cable x 25ft (7.6m) 2 Piece
6	TS98W18	Back Cap O' Ring	17	TS26V	Torch Body with Valve
7	TS57Y02	Back Cap Long	18	TS26F	Torch Body Flexi Head
8	TS57Y04	Back Cap Short	19	TS26FV	Torch Body Flexi Head with Valve

NI - Not Illustrated

(TECHNIWELDUSA)

Consumables

	Collet				
	Item Number	Description			
	TS10N21	Collet .020" (0.5mm) Bore			
	TS10N22	Collet .040" (1.0mm) Bore			
	TS10N23	Collet 1/16" (1.6mm) Bore			
A	TS10N24	Collet 3/32" (2.4mm) Bore			
	TS10N25	Collet 1/8" (3.2mm) Bore			
	TS54N20	Collet 5/32" (4.0mm) Bore			

	Collet Body				
	Item Number	Description			
	TS10N29	Collet Body .020" (0.5mm) Bore			
	TS10N30	Collet Body .040" (1.0mm) Bore			
Б	TS10N31	Collet Body1/16" (1.6mm) Bore			
D	TS10N32	Collet Body 3/32" (2.4mm) Bore			
	TS10N28	Collet Body 1/8" (3.2mm) Bore			
	TS406488	Collet Body 5/32" (4.0mm) Bore			

	Ceramic Cup				
	Item Number	Description			
	TS10N50	#4 Ceramic Cup 1/4" (6mm) Bore			
С	TS10N49	#5 Ceramic Cup 5/16" (8mm) Bore			
	TS10N48	#6 Ceramic Cup 3/8" (10mm) Bore			
	TS10N47	#7 Ceramic Cup 7/16" (11mm) Bore			
	TS10N46	#8 Ceramic Cup 1/2" (13mm) Bore			
	TS10N45	#10 Ceramic Cup 5/8" (16mm) Bore			
	TS10N44	#12 Ceramic Cup 3/4" (19mm) Bore			

	Long Ceramic Cup		
	Item Number	Description	
D	TS10N49L	#5 Long Ceramic Cup 5/16" (8mm) Bore	
	TS10N48L	#6 Long Ceramic Cup 3/8" (10mm) Bore	
	TS10N47L	#7 Long Ceramic Cup 7/16" (11mm) Bore	

	Stubby Collet		
	Item Number	Description	
	TS10N22S	Stubby Collet .040" (1.0mm) Bore	
E	TS10N23S	Stubby Collet 1/16" (1.6mm) Bore	
	TS10N24S	Stubby Collet 3/32" (2.4mm) Bore	
	TS10N25S	Stubby Collet 1/8" (3.2mm) Bore	

	Stubby Collet Body		
	Item Number	Description	
F	TS17CB20	Stubby Collet Body 0.20"-1/8" (0.5-3.2mm) Bore	

	Ceramic Cup				
	Item Number	Description			
G	TS13N08	#4 Ceramic Cup 1/4" (6mm) Bore			
	TS13N09	#5 Ceramic Cup 5/16" (8mm) Bore			
	TS13N10	#6 Ceramic Cup 3/8" (10mm) Bore			
	TS13N11	#7 Ceramic Cup 7/16" (11mm) Bore			
	TS13N12	#8 Ceramic Cup 1/2" (13mm) Bore			
	TS13N13	#10 Ceramic Cup 5/8" (16mm) Bore			

Gas Lens Body				
	Item Number	Description		
Н	TS45V24	Gas Lens Body 0.40" (1.0mm) Bore		
	TS45V25	Gas Lens Body 1/16" (1.6mm) Bore		
	TS45V26	Gas Lens Body 3/32" (2.4mm) Bore		
	TS45V27	Gas Lens Body 1/8" (3.2mm) Bore		

	Gas Lens Cup				
	Item Number	Description			
	TS54N18	#4 Gas Lens Cup 1/4" (6mm) Bore			
I	TS54N17	#5 Gas Lens Cup 5/16" (8mm) Bore			
	TS54N16	#6 Gas Lens Cup 3/8" (10mm) Bore			
	TS54N15	#7 Gas Lens Cup 7/16" (11mm) Bore			
	TS54N14	#8 Gas Lens Cup 1/2" (13mm) Bore			
	TS54N19	#11 Gas Lens Cup 11/16" (17mm) Bore			

	Long Gas Lens Cup		
	Item Number	Description	
J	TS54N17L	#5L Long Gas Lens Cup 5/16" (8mm) Bore	
	TS54N16L	#6L Long Gas Lens Cup 3/8" (10mm) Bore	
	TS54N15L	#7L Long Gas Lens Cup 7/16" (11mm) Bore	

	Large Diameter Gas Lens Body		
	Item Number Description		
к	TS45V116	Large Diameter Gas Lens Body 1/16" (1.6mm) Bore	
	TS45V64	Large Diameter Gas Lens Body 3/32" (2.4mm) Bore	
	TS995795	Large Diameter Gas Lens Body 1/8" (3.2mm) Bore	

	Large Diameter Gas Lens Cup		
	Item Number Description		
L	TS57N75	#6 Large Diameter Gas Lens Cup 3/8" (10mm) Bore	
	TS57N74	#8 Large Diameter Gas Lens Cup 1/2" (13mm) Bore	
	TS53N88	#10 Large Diameter Gas Lens Cup 5/8" (16mm) Bore	
	TS53N87	#12 Large Diameter Gas Lens Cup 3/4" (19mm) Bore	

112



TIG Star™18

Water Cooled TIG Welding Torch

Rating: 350A DC, 260A AC @ 100% Duty Cycle EN60974-7 0.0209 TO 5/329/0.5mm-4.0mm Electrodes

Weldcraft[®] compatible



Description	Item Number		
Description	12ft (3.8m)	25ft (7.6m)	
TIG Welding Torch with Vinyl Power Cable	TS1812	TS1825	
TIG Welding Torch with Rubber Cable	-	TS1825R	
TIG Welding Torch with Flexi Head with Rubber Cable	TS18F12R	TS18F25R	
TIG Welding Torch with Valve with Rubber Cable	_	TS18V25R	

Alternative Torch Bodies

Rating: 350A DC, 260A AC .020" TO 5/32" (0.5mm-4.0mm) electrode.





(TECHNIWELDUSA)



TIG Star™18 Water Cooled TIG Welding Torch

Components

	Item Number	Description	
1	TS18CG	Cup Gasket	9
2	TS18CG20	Cup Gasket for Stubby Collet Body	14
3	TS54N01	Gas Lens Insulator	16
4	TS54N63	Insulator Large Diameter Gas Lens	10
5	TS18	Torch Body including Cup Gasket	17
6	TS98W18	Back Cap O' Ring	17
7	TS57Y02	Back Cap Long	18
8	TS57Y04	Back Cap Short	19

	Item Number	Description
9	TS950	Microswitch Bulbous
14	TS10N15	Handle
16	TS45V09	Vinyl Gas Hose x 12.5ft (3.8m)
	TS45V10	Vinyl Gas Hose x 25ft (7.6m)
17	TS41V29	Power Cable x 25ft (7.6m) Vinyl
	TS41V29R	Power Cable x 25ft (7.6m) Rubber
18	TS45V08	Vinyl Water Hose x 25ft (7.6m)
19	TS18F	Torch Body Flexible

NI - Not Illustrated



Consumables

	Collet			
	Item Number	Description		
	TS10N21	Collet .020" (0.5mm) Bore		
	TS10N22	Collet .040" (1.0mm) Bore		
	TS10N23	Collet 1/16" (1.6mm) Bore		
	TS10N24	Collet 3/32" (2.4mm) Bore		
	TS10N25	Collet 1/8" (3.2mm) Bore		
	TS54N20	Collet 5/32" (4.0mm) Bore		

	Collet Body			
	Item Number	Description		
	TS10N29	Collet Body .020" (0.5mm) Bore		
	TS10N30	Collet Body .040" (1.0mm) Bore		
В	TS10N31	Collet Body1/16" (1.6mm) Bore		
	TS10N32	Collet Body 3/32" (2.4mm) Bore		
	TS10N28	Collet Body 1/8" (3.2mm) Bore		

Ceramic Cup			
	Item Number	Description	
	TS10N50	#4 Ceramic Cup 1/4" (6mm) Bore	
	TS10N49	#5 Ceramic Cup 5/16" (8mm) Bore	
С	TS10N48	#6 Ceramic Cup 3/8" (10mm) Bore	
	TS10N47	#7 Ceramic Cup 7/16" (11mm) Bore	
	TS10N46	#8 Ceramic Cup 1/2" (13mm) Bore	
	TS10N45	#10 Ceramic Cup 5/8" (16mm) Bore	
	TS10N44	#12 Ceramic Cup 3/4" (19mm) Bore	

Long Ceramic Cup			
	Item Number	Description	
D	TS10N49L	#5 Long Ceramic Cup 5/16" (8mm) Bore	
	TS10N48L	#6 Long Ceramic Cup 3/8" (10mm) Bore	
	TS10N47L	#7 Long Ceramic Cup 7/16" (11mm) Bore	

	Stubby Collet			
	Item Number	Description		
E	TS10N22S	Stubby Collet .040" (1.0mm) Bore		
	TS10N23S	Stubby Collet 1/16" (1.6mm) Bore		
	TS10N24S	Stubby Collet 3/32" (2.4mm) Bore		
	TS10N25S	Stubby Collet 1/8" (3.2mm) Bore		

	Stubby Collet Body		
	Item Number	Description	
F	TS17CB20	Stubby Collet Body 0.20"-1/8" (0.5-3.2mm) Bore	

	Ceramic Cup				
	Item Number	Description			
G	TS13N08	#4 Ceramic Cup 1/4" (6mm) Bore			
	TS13N09	#5 Ceramic Cup 5/16" (8mm) Bore			
	TS13N10	#6 Ceramic Cup 3/8" (10mm) Bore			
	TS13N11	#7 Ceramic Cup 7/16" (11mm) Bore			
	TS13N12	#8 Ceramic Cup 1/2" (13mm) Bore			
	TS13N13	#10 Ceramic Cup 5/8" (16mm) Bore			

	Gas Lens Body		
	Item Number	Description	
н	TS45V24	Gas Lens Body 0.40" (1.0mm) Bore	
	TS45V25	Gas Lens Body 1/16" (1.6mm) Bore	
	TS45V26	Gas Lens Body 3/32" (2.4mm) Bore	
	TS45V27	Gas Lens Body 1/8" (3.2mm) Bore	
	TS45V28	Gas Lens Body 5/32" (4.0mm) Bore	

	Gas Lens Cup		
	Item Number	Description	
I	TS54N18	#4 Gas Lens Cup 1/4" (6mm) Bore	
	TS54N17	#5 Gas Lens Cup 5/16" (8mm) Bore	
	TS54N16	#6 Gas Lens Cup 3/8" (10mm) Bore	
	TS54N15	#7 Gas Lens Cup 7/16" (11mm) Bore	
	TS54N14	#8 Gas Lens Cup 1/2" (13mm) Bore	
	TS54N19	#11 Gas Lens Cup 11/16" (17mm) Bore	

Long Gas Lens Cup		
	Item Number	Description
	TS54N17L	#5L Long Gas Lens Cup 5/16" (8mm) Bore
J	TS54N16L	#6L Long Gas Lens Cup 3/8" (10mm) Bore
	TS54N15L	#7L Long Gas Lens Cup 7/16" (11mm) Bore

	Large Diameter Gas Lens Body		
	Item Number	Description	
к	TS45V116	Large Diameter Gas Lens Body 1/16" (1.6mm) Bore	
	TS45V64	Large Diameter Gas Lens Body 3/32" (2.4mm) Bore	
	TS995795	Large Diameter Gas Lens Body 1/8" (3.2mm) Bore	
	TS45V63	Large Diameter Gas Lens Body 5/32" (4.0mm) Bore	

	Large Diameter Gas Lens Cup		
	Item Number	Description	
L	TS57N75	#6 Large Diameter Gas Lens Cup 3/8" (10mm) Bore	
	TS57N74	#8 Large Diameter Gas Lens Cup 1/2" (13mm) Bore	
	TS53N88	#10 Large Diameter Gas Lens Cup 5/8" (16mm) Bore	
	TS53N87	#12 Large Diameter Gas Lens Cup 3/4" (19mm) Bore	

TECHNIWELDUSA

TIG Star™20

Water Cooled TIG Welding Torch

250A DC, 190A AC @ 100% Duty Cycle EN60974-7 0.020"- to 1/8" / 0.5mm-3.2mm Electrodes

Weldcraft[®] compatible



TIG Torches

Deceviation	Item Number		
Description	12ft (3.8m)	25ft (7.6m)	
TIG Welding Torch with Vinyl Power Cable	-	TS2025	
TIG Welding Torch with Flexi Head Rubber Power Cable	_	TS20F25R	
TIG Welding Torch with Pencil Head Rubber Power Cable	_	TS2025R	

Alternative Torch Bodies

Rating: 250A DC, 190A AC .020" TO 1/8" (0.5mm-3.2mm) electrode.







TIG Star™20 Water Cooled TIG Welding Torch

Components

	Item Number	Description
1	TS598882	Cup Gasket
2	TS54N6320	Insulator Large Diameter Gas Lens
3	TS20	Torch Body including Cup Gasket
5	TS41V24	Back Cap Long
6	TS41V35	Back Cap Medium
7	TS41V33	Back Cap Short
8	TS53N04	Wire Clamp
9	TS950	Microswitch Bulbous

	Item Number	Description
13	TS105Z55	Handle
15	TS45V08	Vinyl Water Hose x 25ft (7.6m)
10	TS45V03	Power Cable x 12.5ft (3.8m) Vinyl
10	TS45V04	Power Cable x 25ft (7.6m) Vinyl
17	TS45V09	Vinyl Gas Hose x 12.5ft (3.8m)
''	TS45V10	Vinyl Gas Hose x 25ft (7.6m)
18	TS20F	Torch Body Flexible

NI - Not Illustrated

(TECHNIWELDUSA)

Consumables

	Collet		
	Item Number	Description	
	TS13N20	Collet .020" (0.5mm) Bore	
A	TS13N21	Collet .040" (1.0mm) Bore	
	TS13N22	Collet 1/16" (1.6mm) Bore	
	TS13N23	Collet 3/32" (2.4mm) Bore	
	TS13N24	Collet 1/8" (3.2mm) Bore	

Collet Body		
	Item Number	Description
	TS13N25	Collet Body .020" (0.5mm) Bore
	TS13N26	Collet Body .040" (1.0mm) Bore
	TS13N27	Collet Body1/16" (1.6mm) Bore
D	TS13N27M	Collet Body 5/64" (2.0mm) Bore
	TS13N28	Collet Body 3/32" (2.4mm) Bore
	TS13N29	Collet Body 1/8" (3.2mm) Bore

	Ceramic Cup		
	Item Number	Description	
	TS13N08	#4 Ceramic Cup 1/4" (6mm) Bore	
С	TS13N09	#5 Ceramic Cup 5/16" (8mm) Bore	
	TS13N10	#6 Ceramic Cup 3/8" (10mm) Bore	
	TS13N11	#7 Ceramic Cup 7/16" (11mm) Bore	
	TS13N12	#8 Ceramic Cup 1/2" (13mm) Bore	
	TS13N13	#10 Ceramic Cup 5/8" (16mm) Bore	

	Long Ceramic Cup		
	Item Number	Description	
D	TS796F72	#4 Long Ceramic Cup 5/16" (8mm) Bore	
	TS796F73	#5 Long Ceramic Cup 3/8" (10mm) Bore	
	Extra Long Ceramic Cup		
	Item Number	Description	
Е	TS796F77	#6 Extra Long Ceramic Cup 3/8" (10mm) Bore	

	Gas Lens Body	
	Item Number	Description
	TS45V42	Gas Lens Body 0.40" (1.0mm) Bore
E	TS45V43	Gas Lens Body 1/16" (1.6mm) Bore
Г	TS45V44	Gas Lens Body 3/32" (2.4mm) Bore
	TS45V45	Gas Lens Body 1/8" (3.2mm) Bore
		Gas Lens Cup
	Item Number	Description
	TS53N58	#4 Gas Lens Cup 1/4" (6mm) Bore
	TS53N59	#5 Gas Lens Cup 5/16" (8mm) Bore
G	TS53N60	#6 Gas Lens Cup 3/8" (10mm) Bore
	TS53N61	#7 Gas Lens Cup 7/16" (11mm) Bore
	TS53N61S	#1S Gas Lens Cup 1/2" (13mm) Bore
	Larg	e Diameter Gas Lens Collet
	Item Number	Description
	TS13N22L	Large Diameter Gas Lens Collet 1/16″ (1.6mm) Bore
Н	TS13N23L	Large Diameter Gas Lens Collet 3/32" (2.4mm) Bore
Large Diameter Gas Lens Body		
	Item Number	Description
1	TS45V116S	Large Diameter Gas Lens Body 1/16″ (1.6mm) Bore
	TS45V64S	Large Diameter Gas Lens Body 3/32″ (2.4mm) Bore

	Large Diameter Gas Lens Cup			
	Item Number	umber Description		
	TS57N75	#6 Large Diameter Gas Lens Cup 3/8" (10mm) Bore		
J	TS57N74	#8 Large Diameter Gas Lens Cup 1/2" (13mm) Bore		
	TS53N88	#10 Large Diameter Gas Lens Cup 5/8" (16mm) Bore		
	TS53N87	#12 Large Diameter Gas Lens Cup 3/4" (19mm) Bore		

TIG Star™ Holder

Item Number	Description	
	Magnetic base	
	 Keeps your TIG gun secure when not in use 	
ISTIGLIOLDEN	 Works in vertical and horizontal positions 	
	Durable enamel finish with zinc coated base	





Tungsten Electrodes

1% Thoriated (Yellow) EWTh-1 Principle Oxide: 0.80 - 1.2% Thorium Oxide

Designation for thorium dioxide doped tungsten electrodes containing 0.8% to 1.2% Th02. These electrodes provide easy arc starting, arc stability, good current capacity, and resistance to weld pool contamination.





Radioactive. Best for use in Direct Current (D/C) applications using transformer based constant current power sources. Best for use on non-corroding steels, titanium alloys, nickel alloys, copper alloys. Good D/C arc starts and stability, medium erosion rate, medium amperage range, medium tendency to spit.

1% Lanthanated (Black) EWLa-1 Principle Oxide: 0.90 - 1.2% Lanthanum Oxide

Non-radioactive. Suitable for use in Direct Current (D/C) or Alternating Current (A/C). These electrodes have excellent arc starting, low-burn-off rate, good arc stability and excellent re-ignition characteristics. Maintain a sharpened point well and can replace both ceriated and thoriated because, unlike thoriated tungsten, these electrodes are suitable for AC welding and, like ceriated electrodes, they allow for lower voltage arcs.



1.5% Lanthanated (Gold) EWLa-1.5/WL15 Principle Oxide: 1.3 - 1.7% Lanthanum Oxide

Non-radioactive. Best for use in Direct Current (D/C) as an alternative to 2% Thoriated using inverter or transformer based constant current power sources. Best for non-corroding steels, titanium alloys, nickel alloys, copper alloys. Best D/C arc starts and stability, low erosionrate, wide amperage range, no spitting.

2% Lanthanated (Blue) EWLa-2/WL20 Principle Oxide: 1.8 - 2.2% Lanthanum Oxide

Non-radioactive. Best general purpose electrode for both Alternating Current (A/C) or Direct Current (D/C) using inverter or transformer based constant current power sources. Good for low-alloyed steels, non-corroding steels, aluminum alloys, magnesium alloys, titanium alloys, nickel alloys, copper alloys. Good arc starts and stability, medium to high amperage range, low erosion rate.





Tungsten Electrodes



2% Ceriated (Gray) EWCe-2/WL20 Principle Oxide: 1.8 - 2.2% Cerium Oxide

Non-radioactive. Best for use in Alternating Current (A/C) or Direct Current (D/C) applications using inverter or transformer based constant current power sources. Good for low-alloyed steels, non-corroding steels, aluminum alloys, magnesium alloys, titanium alloys, nickel alloys, copper alloys. Good ignition and re-ignition properties, long service life, excellent arc stability. Low erosion rate, best at low amperage range, no spitting, good D/C arc starts and stability.

Pure (Green) EWP/WP Principle Oxide: None

Non-radioactive. Best for use in Alternating Current (A/C) for aluminum alloys and magnesium alloys in low to medium amperage applications using transformer based constant current power sources only. Balls easy, tends to spit at higher amperages. Used for non-critical welds only.





0.3% Zirconiated (Brown) EWZr-1/WZ3 Principle Oxide: 0.3% Zirconium Oxide

Non-radioactive. Best for Alternating Current (A/C) for aluminum and magnesium alloys using inverter or transformer based constant current power sources. Retains a balled during welding, and has a high resistance to contamination. Better arc starts, stability, and less splitting than pure.

8% Zirconiated (White) AWS A5.12 WEZr-8 Principal Oxide: 0.7- 0.9% Zirconium Oxide

White zirconiated tungsten electrodes handle higher amperage levels and work well with both transformer and inverter power sources, making them an excellent alternative to the green pure tungsten electrodes for magnesium and aluminum alloys.





Super Blend (Purple) EWG Principle Oxide: 1.5% Lanthanum Oxide, .08% Zirconium Oxide, .08% Yttrium Oxide

Non-radioactive. Best for use in Alternating Current (A/C) or Direct Current (D/C) application using inverter or transformer based constant current power sources. The innovative Super Blend electrode is an excellent substitute for 2% Thoriated red tungsten and boasts the same high performance properties. It's best used when welding aluminum alloys, magnesium alloys, titanium alloys, nickel alloys, copper alloys, low-alloyed steels, and non-corrosive steels.



Tungsten Electrode Guide

YELLOW 1% Thoriated AWS A5.12 EWTh-1 ISO 6848 WT20		
Size Item Number		
Inches	Millimeters	10 Piece
.040 x 7"	1.0 x 175 mm	TU1T0407
3/32 x 7"	2.4 x 175 mm	TU1T0937

RED 2% Thoriated AWS A5.12 EWTh-2 ISO 6848 WT20			
Size		Item Number	
Inches	Millimeters	10 Piece	
.020 x 3"	.5 x 76.2 mm	TU2T0203	
.020 x 7"	.5 x 175 mm	TU2T0207	
.040 x 3"	1.0 x 76.2 mm	TU2T0403	
.040 x 7"	1.0 x 175 mm	TU2T0407	
1/16 x 12"	1.6 x 304.8 mm	TU2T06212	
1/16 x 18"	1.6 x 457.2 mm	TU2T06218	
1/16 x 3"	1.6 x 76.2 mm	TU2T0623	
1/16 x 7"	1.6 x 175 mm	TU2T0627	
3/32 x 12"	2.4 x 304.8 mm	TU2T09312	
3/32 x 3"	2.4 x 76.2 mm	TU2T0933	
3/32 x 7"	2.4 x 175 mm	TU2T0937	
3/32 x 7"	2.4 x 175 mm	TU2T0937C	
1/8 x 3″	3.2 x 76.2 mm	TU2T1253	
1/8 x 7"	3.2 x 175 mm	TU2T1257	
5/32 x 12"	3.96 x 304.8 mm	TU2T15612	
5/32 x 7"	3.96 x 175 mm	TU2T1567	
3/16 x 18"	4.76 x 457.2 mm	TU2T18718	
3/16 x 7"	4.76 x 175 mm	TU2T1877	
1/4 x 7"	6.35 x 175 mm	TU2T2507	

BLACK 1% Lanthanated AWS A5.12 EWLa-1 ISO 6848 WL10		
Size		Item Number
Inches	Millimeters	10 Piece
1/16 x 7"	1.6 x 175 mm	TU1L0627
3/32 x 7"	2.4 x 175 mm	TU1L0937
1/8 x 7"	3.2 x 175 mm	TU1L1257
5/32 x 7"	3.96 x 175 mm	TU1L1567

Tungsten Electrode Guide

GOLD 1.5% Lanthanated AWS A5.12 EWLa-1.5 ISO 6848 WL15			
S	Size	Item Number	
Inches	Millimeters	10 Piece	
.020 x 7"	.5 x 175 mm	TU15L0207	
.040 x 7"	1.0 x 175 mm	TU15L0407	
1/16 x 7"	1.6 x 175 mm	TU15L0627	
3/32 x 7"	2.4 x 175 mm	TU15L0937	
1/8 x 7"	3.2 x 175 mm	TU15L1257	
5/32 x 7"	3.96 x 175 mm	TU15L1567	
.187 x 12″	4.75 x 304.8 mm	TU15L18712	

BLUE 2% Lanthanated AWS A5.12 EWLa-2 ISO 6848 WL20			
S	Size Item Number		
Inches	Millimeters	10 Piece	
1/16 x 7″	1.6 x 175 mm	TU2L0627	
3/32 x 7"	2.4 x 175 mm	TU2L0937	
1/8 x 7"	3.2 x 175 mm	TU2L1257	
3/16 x 7"	4.76 x 175 mm	TU2L1877	

GRAY 2% Ceriated AWS A5.12 EWCe-2 ISO 6848 WC20		
ę	Size	Item Number
Inches	Millimeters	10 Piece
.040 x 7"	1.0 x 175 mm	TU2C0407
1/16 x 7"	1.6 x 175 mm	TU2C0627
3/32 x 7"	2.4 x 175 mm	TU2C0937
1/8 x 7″	3.2 x 175 mm	TU2C1257
5/32 x 7"	3.96 x 175 mm	TU2C1567
3/16 x 7"	4.76 x 175 mm	TU2C1877



Tungsten Electrode Guide

GREEN Pure AWS A5.12 EWP ISO 6848 WP			
Size		Item Number	
Inches	Millimeters	10 Piece	
.040 x 7"	1.0 x 175 mm	TUP0407	
1/16 x 7″	1.6 x 175 mm	TUP0627	
3/32 x 7"	2.4 x 175 mm	TUP0937	
1/8 x 7"	3.2 x 175 mm	TUP1257	
1/8 x 12"	3.2 x 304.8 mm	TUP12512	
5/32 x 7"	3.96 x 175 mm	TUP1567	
3/16 x 7"	4.76 x 175 mm	TUP1877	

BROWN .3% Zirconiated AWS A5.12 EWZr-1 ISO 6848 WZ3			
S	Size	Item Number	
Inches	Millimeters	10 Piece	
.040 x 7"	1.0 x 175 mm	TUZ0407	
1/16 x 7"	1.6 x 175 mm	TUZ0627	
3/32 x 7"	2.4 x 175 mm	TUZ0937	
1/16 x ?"	1.6 x ? mm	TUZ125	
1/8 x 7"	3.2 x 175 mm	TUZ1257	
5/32 x 7"	3.96 x 175 mm	TUZ1567	
3/16 x 7"	4.76 x 175 mm	TUZ1877	

WHITE 8% Zirconiated AWS A5.12 EWZr-8 ISO 6848 WZ8			
Size		Item Number	
Inches	Millimeters	10 Piece	
3/32 x 7"	2.4 x 175 mm	TU8Z0937	
1/8 x 7"	3.2 x 175 mm	TU8Z1257	

Purple Super Blend AWS A5.12M/A5.12:2009		
Size		Item Number
Inches	Millimeters	10 Piece
1/16 x 7"	1.6 x 175 mm	TUSB30627
3/32 x 7"	2.4 x 175 mm	TUSB30937
1/8 x 7″	3.2 x 175 mm	TUSB31257
1/4 x 7"	6.35 x 175 mm	TUSB32507
5/32 x 7"	3.96 x 175 mm	TUSB1567



QUALITY MANUFACTURER AND PROCESSOR OF WELDING SUPPLIES AND ALLOYS



WWW.TECHNIWELDUSA.COM

124

1 (800) - 445 - 2152





Call any of our locations for additional vendors and product information



Corporate Office

6205 Boat Rock Blvd. SW Atlanta, Georgia 30336 Toll Free: (800) 445-2152 Fax: (404) 699-7800 Email: sales@techniweldusa.com



Exports Office 6205 Boat Rock Blvd. SW Atlanta, Georgia 30336

Toll Free: (800) 445-2152 Fax: (404) 856-4894 Email: exportoffice@techniweldusa.com



Houston, Texas

6015 Murphy Street Houston, TX 77033 Toll Free: (877) 674-5586 Fax: (713) 996-7180 Email: sales@techniweldusa.com



Youngstown, Ohio 1120 Oak Hill Ave Youngstown, OH 44502 Toll Free: (877) 489-3847

Fax: (330) 743-9610 Email: sales@techniweldusa.com



Jackson, Mississippi 880 South Roach Rd. Jackson, MS 39201 Toll Free: (800) 647-7144 Fax: (601) 718-1102 Email: sales@techniweldusa.com

WWW.TECHNIWELDUSA.COM



WANT TO RECEIVE OUR EMAILS?



Receive the hottest Techniweld deals and news first! Contact sales@techniweldusa.com to join our email list.

FOLLOW US ON SOCIAL MEDIA



YouTube



facebook







twitter



WWW.TECHNIWELDUSA.COI

TECHNIWELDUSA

6205 Boat Rock Blvd. SW Atlanta, Georgia 30336-2727 Toll Free: (800) 445-2152 Fax: (404) 699-7800 sales@techniweldusa.com

