SPECIAL PURPOSE ELECTRODES

ARMORWELD 307
AC/DC ± (Straight OR Reverse Polarity) A 19% Chrome/9% Nickel Flux-Coated Electrode

	1 LB CONTAINER		10 LB CONTAINER	
SIZE	PART No.	PRICE	PART No.	PRICE
3/32	-	-	307332-10	$65.60
1/8	-	-	30718-10	$63.60
5/32	-	-	307532-10	$63.40
3/16	-	-	-	-

APPLICATIONS

Armorweld 307 is designed to produce moderate strength-crack resistant weld deposits in armor plate and between dissimilar steels such as 14% manganese steel to carbon steel forgings or castings. THE PERFECT ELECTRODE TO USE ON "DIFFICULT TO WELD STEELS." Excellent for joining wear resistant steel plates of high tensile strength, for welding stainless steel to carbon steel and for building up rails. Commonly used in mining and dredging equipment as well as within steel manufacturing facilities.

FEATURES

Armorweld 307 deposits offer excellent toughness and corrosion resistance. Weld deposits remain crack-resistant without any preheat or postheat treatment. Heat resistance up to 1460°F. Impact properties remain strong down to -150°F. Weld deposits are non-magnetic and they are machinable in the "as-welded" condition, however Armorweld 307 deposits do work-harden (up to R_C52) when put into service. Beautiful welds with AC current!

SPECIFICATIONS

Hardness (as welded) ..... 200 HB
Hardness (work-hardened) ..... 500 HB
Tensile Strength ..... 93,000 psi
Yield Strength ..... 68,000 psi
Elongation. in 2" 40%

AVAILABLE SIZES AND RECOMMENDED AMPERAGE

3/32 (2.4 mm)	65-70 Amps
1/8 (3.2 mm)	95-120 Amps
5/32 (4.0 mm)	110-160 Amps

CUTROD

	1 LB CONTAINER		50 LB CONTAINER	
SIZE	PART No.	PRICE	PART No.	PRICE
3/32	CR332-1	$5.50	CR332-50	$247.50
1/8	CR18-1	$5.50	CR18-50	$237.50
5/32	CR532-1	$5.50	CR532-50	$237.50
3/16	CR316-1	$5.50	CR316-50	$237.50

APPLICATIONS

Cutrod is a fast-working electrode used for cutting and piercing all metals including austenitic steel and mild steel. This electrode is frequently used for removing rivets and bolts, enlarging openings, trimming metals, etc.

PROCEDURES AND CHARACTERISTICS

USA Cutrod may be used with AC or DC (straight polarity) on most welding machines. Using the recommended amperage, hold the electrode at a 45° angle, strike the arc and use a "sawing" technique to cut through the base metal. Be sure to keep the arc gap as short as possible. To pierce holes, simply hold the electrode vertical, strike the arc and push through the base metal, removing the electrode immediately once the hole is made. The size of the hole may be increased by moving the electrode in a circular motion. Cutrod does not require gases or special equipment such as air compressors.

RECOMMENDED AMPERAGE (AC OR DC-)

Size	3/32	1/8	5/32	3/16
Amp.	120	170	230	300

ALUMINUM 345 ELECTRODE
DC+ only
(Can Also Be Used With Torch)

	1/2 LB CONTAINER		5 LB CONTAINER	
SIZE	PART No.	PRICE	PART No.	PRICE
3/32	345332-1	$16.50	345332-5	$107.50
1/8	34518-1	$16.50	34518-5	$106.50
5/32	345532-1	$16.50	345532-5	$106.50
3/16	-	-	-	-

APPLICATIONS

Aluminum 345 is an extruded aluminum electrode used for low temperature production and maintenance welding of cast and wrought aluminum sheets, plates, castings and extrusions with a thickness of 3/32" or more. Typical applications would include tanks, pipes, some appliances, refrigeration equipment, automobile parts and parts found in the laundry, chemical and food processing industries.

PROCEDURES

Clean the area to be welded. Large or heavy sections should be beveled to a 60° or 75° vee. Align the parts to be welded by tacking the joint(s). Preheating the larger sections to 350°F will allow for a flatter bead as well as reducing the required amperage. Using DC+ polarity, maintain a short arc length while tilting the electrode in the direction of travel. The weaving technique is not recommended because of the faster travel speed required when welding aluminum. Allow the part to cool, then remove all slag before making multiple passes. You may want to use a stainless steel wire brush and warm water to remove any flux residue. Many times a 10% sulphuric acid solution is used in the warm water. This will give the weld deposit a cleaner, more polished appearance.

CHARACTERISTICS

Aluminum 345 may be used in any position to produce dense and porosity-free machinable weld deposits. The special flux coating yields a stable arc with low spatter and reduced fuming. Weld deposits cannot be heat treated or anodized. The color match and corrosion resistance of Aluminum 345 weld deposits is excellent. Tensile strength of the weld deposit will be approximately 34,000 psi

RECOMMENDED AMPERAGE - DC+

Size	3/32	1/8	5/32
Amp.	50-85	85-140	110-165

CHAMFER ROD (GROOVE ROD)

MSDS THIS PAGE AVAILABLE

	1 LB CONTAINER		50 LB CONTAINER	
SIZE	PART No.	PRICE	PART No.	PRICE
1/8	CAR18-1	$5.95	CAR18-50	$239.50
5/32	CAR532-1	$5.95	CAR532-50	$239.50
3/16	CAR316-1	$5.95	CAR316-50	$239.50

APPLICATIONS

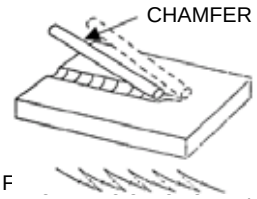
Chamfer Rods are used for gouging, beveling and veeing out of excess metal in ferrous and nonferrous materials. This rod is most commonly used for removing old weld metal and sharp edges prior to subsequent welding operation.

PROCEDURES AND CHARACTERISTICS

Chamfer Rods may be used with either AC or DC (straight polarity) on any welding machine. Use the recommended amperage and hold the electrode at a low angle, pushing it rapidly forward, while applying slight pressure on the work. One pass will produce a clean groove, removing material equal to the diameter of the chamfer rod. Deeper grooves may be obtained by making multiple passes. Chamfer Rods produce a "blowing action" which removes all unwanted material (including dirt, grease, oil, etc.) from the base metal. It requires no gases or special equipment such as air compressors.

RECOMMENDED AMPERAGE (AC OR DC-)

Size	3/32	1/8	5/32	3/16
Amp.	120	170	230	350



F force of the GROOVE ROD arc removes the molten metal, by pushing it out in front of the groove, with a forward and backward motion. Where possible, the work should be inclined so that the molten metal can run free under the force of gravity.

STUD EXTRACTOR
ELECTRODE FOR REMOVING BROKEN BOLT STUBS OR TAPS

1 LB CONTAINER SIZE	PART NO.	PRICE EA	HOLE DIA.	AC OR DC+ AMPERAGE
1/16	SE116-1	$42.95	5/32-1/4"	25-35
3/32	SE332-1	$39.95	1/4-3/8"	30-90
1/8	SE18-1	$39.95	3/8-1/2"	75-120
5/32	SE532-1	$39.95	1/2"-UP	100-145

DESCRIPTION:

The Stud Extractor was developed specifically for the purpose of removing bolts, drills or taps broken off below the surface of their root. No special equipment is required for use of this product. Extractions can be done in the shop or in the field, anywhere there is access to a welding machine. This product is coated with a unique ceramic flux which protects existing threads during the down hole buildup process. The complex alloy structure of this electrode allows it to be used on bolts and taps made of standard or hardened steels. Its deposited metal is stronger than most bolts and will even gain toughness as you torque it during the extraction process.

PROCEDURES

1. Select the electrode diameter and set machine to corresponding amperage.
2. Select a nut with the same size hole as the hole in the work piece and place it on the work piece hole to hole.
3. Insert Stud Extractor electrode through the nut and strike the arc onto the center of the broken bolt or tap.
4. Maintain a short arc and build up carefully in the center of the target piece straight up through the middle of the hole allowing the ceramic slag to surround the buildup and protect the existing threads.
5. Continue building up to the top of the nut but don't weld the nut to the buildup.
6. Allow part to cool then remove the nut and protruding portion of the slag.
7. Replace the nut around the buildup and weld the nut to the buildup with the Stud Extractor rod being careful not to weld the nut to the work piece.
8. Allow finished weld to cool to room temperature.
9. Lightly tap the nut to loosen slag then remove the broken piece by turning the nut with an appropriate wrench.