Castolin Eutectic®
Eutectic Castolin

Specially Formulated High-Alloy Electrode For Welding Dissimilar, Unknown And Problem Steels

EutecTrode® 680

- Repairs to most high alloy steel components
- Maximum repair reliability
- Extended part service life
- Reduced inventory carrying costs
- Improved capital & equipment management

EutecTrode® 680

Many carbon steel, and most high alloy steels, are typically heat-treated to maximize their mechanical properties. With the wide range of application uses for these steel grades from industry-to-industry, the need to use a "universal" repair alloy is often the only practical solution for critical, timely repairs. The answer: EutecTrode 680! A time and tested universal electrode for ALL critical Maintenance & Repair applications.

EutecTrode 680 has a unique formula that enhances all-position weldability while maintaining superior crack-resistance even when diluted. Mechanical properties are at the high-end which guarantees an excellent in-service Maximum Safety Margin (MSM).

TECHNICAL DATA

Typical Values	
Tensile Strength:	120,000 psi
Yield Strength:	79,000 psi
Elongation (1=5d) min.:	25%
Hardness as-deposited:	90 HRB
Maximum Temperature:	800°F steady-state
Current polarity:	DCEP (+) or AC (~)

DIAMETER	3/32" (2.4mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)
AMPERAGE	55-70	75-95	90-115	135-190

Note: for optimum results use the lowest amperage practical

PROCEDURE FOR USE

PREPARATION: Clean weld area of scale and/or oxide. Angle prepping normally involves close-butts and infrequently bevel preparations. If needed, a 60° bevel is acceptable. Preheat and inter-pass temperatures will depend on the grade of steel, if known. Unknown grades should be nominally preheated within a 400-500°F range.

TECHNIQUE: A short, non-contact technique is recommended for both fillet and butt- welding. Use a slightly longer arc length for bead-on-plate welding. Deposit stringer beads or 2x to 3x weave beads. Do not weave more than three times the electrode diameter otherwise slag interference will be encountered.

POST WELDING: Parts which have been preheated should be wrapped or covered with heat-retardant material to slow cool parts...critical for Tools & Dies.

TYPICAL APPLICATIONS

The combined application range is broad: From jigs, molds, dies, leaf springs, high-strength repairs to earthmoving, mining, and constructional equipment chassis, undercarriage repairs, composite die fabrications, manganese steel components.

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