MIDALLOY ER316/316H BARE WIRE

CLASSIFICATION

- AWS 5.9 Class ER316/ER316H / ASME SFA 5.9 Class ER316/ER316H
- UNS# S31680 A#8 F#6

DESCRIPTION

- MIDALLOY ER316/ER316H stainless steel wire is used for GMAW, GTAW, and SAW welding.

APPLICATIONS

- MIDALLOY ER316/ER316H is used for joining type 316 and similar alloys.
- The presence of molybdenum provides creek resistance at elevated temperatures and pitting resistance in a halide atmosphere.
- Rapid corrosion of ER316 weld metal may occur when three factors co-exist:
  1. The presence of a continuous or semi-continuous network of ferrite in the weld metal microstructure.
  2. A composition balance of the weld metal giving a chromium-molybdenum ratio of less than 8.2 to 1.
  3. Immersion of the weld metal in a corrosive medium.

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Ni	Mo	S	P	N	Cu
.055	1.65	.40	19.0	12.0	2.50	.009	.015	.05	.05

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	88,500 PSI
YIELD STRENGTH	58,500 PSI
ELONGATION IN 2”	34%

RECOMMENDED WELDING PARAMETERS

PROCESS	DIAMETER	VOLTAGE	AMPERAGE	GAS/FLUX*
TIG (GTAW)	1/16” 3/32” 1/8”	14-18 15-20 15-20	90-130 120-175 150-220	100% Ar 100% Ar 100% Ar
MIG (GMAW)	.035” SHORT ARC .035” SPRAY ARC .045” SPRAY ARC	16-26 26-31 28-32	70-160 150-230 180-280	69%Ar-30%He-1%O_2 92%Ar-8%Co_2 or 98%Ar-2%O_2
SUB ARC (SAW)	3/32” 1/8”	28-30 29-32	275-350 350-450	Record IN or Record IND 24

STANDARD PACKAGING

- TIG 10 lb. tube/60 lb. carton
- MIG 30 lb. spool/1200 lb. pallet
- SUB ARC 60 lb. coil/1440 lb. pallet

09/19/11

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Midalloy