A5.28 | LOW-ALLOY STEEL

Filler Metals for Gas Shielded Arc Welding

ER100S -1

ER100S -1 welding alloy produces high tensile strength, high impact resistant weld deposits that retain their toughness to -70°F making it suitable for low temperature critical applications.

Typical Applications
- Welding HY80 and HY100 steels
- Petrochemical and building industry
- Structural work
- Industrial equipment
- Cranes
- Tanks
- Material Handling

AWS Specification
AWS A5.28/A5.28M:2005

AWS Classification ER100S-1

Welding Current for MIG process
GMAW - DCEP

Typical Wire Chemistry

C	0.08
Mn	1.25 - 1.80
Si	0.20 - 0.55
P	0.010
S	0.010
Ni	1.40 - 2.10
Cr	0.30
Mo	0.25 - 0.55
V	0.05
Ti	0.10
Zr	0.10
Al	0.10
Cu	0.25
OTHER	0.50

Typical Mechanical Properties (As Welded)

Yield Strength, ksi	88
Tensile Strength, ksi	100
Elongation%, min	16

Welding Positions F,V,OH,H

Available Diameters MIG and suggested Operating Range in Amps

.030"	90 - 140
.035"	100 - 150
.045"	150 - 200

Available Diameters TIG
.035", .045", 1/16", 3/32" & 1/8"

ER110S -1

ER110S -1 is the ideal choice of filler metal when high strength and superior ductility are required at temperatures as low as -75°F.

Typical Applications
- Welding HY100 steels
- Lifting and handling machines
- Bridges
- Tanks
- Transport
- Shipbuilding
- Railway sector
- Mines
- Vibrant Sieves
- Tank lorries

AWS Specification
AWS A5.28/A5.28M:2005

AWS Classification ER110S-1

Welding Current for MIG process
GMAW - DCEP

Typical Wire Chemistry

C	0.09
Mn	1.40 - 1.80
Si	0.20 - 0.55
P	0.010
S	0.010
Ni	1.90 - 2.60
Cr	0.50
Mo	0.25 - 0.55
V	0.04
Ti	0.10
Zr	0.10
Al	0.10
Cu	0.25
OTHER	0.50

Typical Mechanical Properties (As Welded)

Yield Strength, ksi	95
Tensile Strength, ksi	110
Elongation%, min	15

Welding Positions F,V,OH,H

Available Diameters MIG and suggested Operating Range in Amps

.035"	100 - 150
.045"	150 - 200

Available Diameters TIG
1/16", 3/32" & 1/8"

ER120S -1

ER120S -1 is used for a variety of steels where high strength and ductility are critical. It is designed to provide high notch toughness, yield strength, and impact resistance.

Typical Applications
- Welding all steels in the 100,000 psi range including T-1 and HY100
- Lifting and handling machines
- Bridges
- Tanks
- Transport
- Shipbuilding
- Railway sector
- Mines
- Vibrant Sieves
- Tank lorries

AWS Specification
AWS A5.28/A5.28:M2005

AWS Classification ER120S-1

Welding Current for MIG process
GMAW - DCEP

Typical Wire Chemistry

C	0.10
Mn	1.40 - 1.80
Si	0.25 - 0.60
P	0.010
S	0.010
Ni	2.00 - 2.80
Cr	0.60
Mo	0.30 - 0.65
V	0.03
Ti	0.10
Zr	0.10
Al	0.10
Cu	0.25
OTHER	0.50

Typical Mechanical Properties (As Welded)

Yield Strength, ksi	105
Tensile Strength, ksi	120
Elongation%, min	14

Welding Positions F,V,OH,H

Available Diameters MIG and suggested Operating Range in Amps

.035"	100 - 150
.045"	150 - 200

Available Diameters TIG
1/16", 3/32" & 1/8"