

PROLONG 70S-2

ER70S-2 Carbon Steel Welding Wire

APPLICATION

ER70S-2 is a triple deoxidized (Aluminum, Titanium, Zirconium) welding wire designed for welding over rust and mill scale.

SPECIFICATION COMPLIANCE

AISI/AWS A5.18 & ASME SFA 5.18 ER70S-2

NOMINAL COMPOSITION

Carbon 0.07% max	Chromium 0.15 % max
Copper 0.50 % max	Vanadium 0.03% max
Manganese 0.90-1.40 %	Molybdenum 0.15 % max
Silicon 0.40-0.70%	Titanium 0.05-.15 %
Sulfur 0.035 % max	Zirconium 0.02-.12 %
Phosphorus 0.025 % max	Aluminum 0.05-.15 %
Nickel 0.15 % max	Iron Balance

PHYSICAL PROPERTIES

Density lbs/cu in 0.283

TYPICAL MECHANICAL PROPERTIES AS WELDED (GMAW)

Tensile Strength (psi)	78,000
Elongation in 2'	25%
Yield Strength (psi)	60,000

*RECOMMENDED WELDING PARAMETERS

GMAW(MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray transfer:

Amps	85-170 Amps	0.023" Dia
	135-230 Amps	0.030" Dia
	165-300 Amps	0.035" Dia
	200-375 Amps	0.045" Dia
	275-500 Amps	1/16" Dia
Volts	300-600 Amps	3/32" Dia
	23-27 Volts	0.023" Dia
	24-28 Volts	0.030" Dia
	24-28 Volts	0.035" Dia



P.O. Box 10357
College Station, TX 77842

936-825-2532
sales@dynalloyinc.com

	24-30 Volts	0.045" Dia
	24-32 Volts	1/16" Dia
	24-33 Volts	3/32" Dia
Argon/ 1-5% O2 (cfh)	25 cfh	0.023" Dia
	25 cfh	0.030" Dia
	30 cfh	0.035" Dia
	30-35 cfh	0.045" Dia
	40 cfh	1/16" Dia
	50 cfh	3/32" Dia
Wire Feed (ipm)	360-620 ipm	0.023" Dia
	390-670 ipm	0.030" Dia
	360-520 ipm	0.035" Dia
	210-390 ipm	0.045" Dia
	150-360 ipm	1/16" Dia
	75-125 ipm	3/32" Dia

GTAW (Tig) Parameters (DCSP) 2 %Thoriated Tungsten Electrode negative

Material Dia.	Tungsten Dia.	Filler Wire Size	Amps	Gas Cup	Argon(cfh)
1/16" Dia	1/16" Dia	1/16" Dia	100-140 Amps	3/8"	20 cfh
3/32" Dia	1/16" Dia	1/16" Dia	100-160 Amps	3/8"	20 cfh
1/8" Dia	3/32" Dia	1/16" Dia	125-200 Amps	7/16"	20 cfh
3/16" Dia	3/32" Dia	3/32" Dia	150-250 Amps	7/16"	25 cfh
1/4" Dia	1/8" Dia	1/8" Dia	150-250 Amps	1/2"	25 cfh
3/8" Dia	1/8" Dia	1/8" Dia	150-275 Amps	1/2"	25 cfh
1/2" Dia	1/8" Dia	1/8" Dia	150-300 Amps	1/2"	25 cfh

**All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes, and other factors.*

SAFETY INFORMATION:

WARNING: PROTECT yourself and others. Read and understand this information.

FUMES AND GASES can be hazardous to your health.

HEAT RAYS (INFRARED RADIATION) from flame or hot metal can injure eyes.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheet (MSDS) and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the flame, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- See American National Standard Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402

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