THE HARRIS PRODUCTS GROUP
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TECHNICAL SPECIFICATION SHEET

ER70S-6 CARBON STEEL WELDING WIRE

ISO 9001
Cert. No. 31598

STATEMENT OF LIABILITY- DISCLAIMER

Any suggestion of product applications or results is given without representation or warranty, either expressed or implied. Without exception or limitation, there are no warranties of merchantability or of fitness for particular purpose or application. The user must fully evaluate every process and application in all aspects, including suitability, compliance with applicable law and non-infringement of the rights of others. The Harris Products Group and its affiliates shall have no liability in respect thereof.

NOMINAL COMPOSITION:

Carbon	0.06-.15% max.	Chromium	.15% max.
Manganese	1.40-1.85 %	Copper	.50% max.
Sulfur	0.035 % max.	Silicon	.80-1.15 % max.
Nickel	0.15 % max.	Phosphorus	.025% max.
Vanadium	.03% max.	Moybdenum	.15% max.
Iron	Balance	Other Totals	.50% max.

PHYSICAL PROPERTIES:

Density lbs/cu in .283

TYPICAL MECHANICAL PROPERTIES AS WELDED

Shielding Gas	CO_2	75% Ar 25% CO_2	98% Ar 2% O_2
Tensile Strength (psi)	80-85,000	85-90,000	85-90,000
Yeild Strength (psi	65-70,000	70-75,000	70-75,000
Elongation in 2”	28.5%	28%	28%
Reduction of Area	55-70%	55-70%	55-70%
Charpy V-notch ft. lbs.	20-30	25-35	30-40%

APPLICATION:

Used primarily for single pass on steels where rusty and dirty surfaces are not cleaned before welding.

* RECOMMENDED WELDING PARAMETERS:

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

Wire Diameter	Amps	Volts	Argon/1/5% O_2	Wire Feed ipm
.023	85-170	23-27	25	360-620
.030	135-230	24-28	25	390-670
.035	165-300	24-28	30	360-520
.045	200-375	24-30	30-35	210-360
1/16	275-500	24-32	40	150-360
3/32	300-600	24-33	50	75-125

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GTAW (Tig) Parameters (DCSP) 2 %Thoriated Tungsten Electrode negative(1)

Material	Tungsten dia. (1)	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16”	1/16”	1/16”	100-140	3/8	20
3/32”	1/16”	1/16”	100-160	3/8	20
1/8”	3/32”	1/16”	125-200	7/16	20
3/16	3/32”	3/32”	150-250	7/16	25
¼”	1/8”	1/8”	150-250	½	25
3/8”	1/8”	1/8”	150-275	½	25
½”	1/8	1/8”	150-300	½	25

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

SPECIFICATION COMPLIANCE: AISI/AWS A5.18 & ASME SFA 5.18 ER 70S-6

WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES can be hazardous to your health.
ARC RAYS can injure eyes and burn skin.
ELECTRIC SHOCK can KILL.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheets (MSDSs), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- Do not touch live electrical parts.
- 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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