



T H E H A R R I S P R O D U C T S G R O U P
A L I N C O L N E L E C T R I C C O M P A N Y
 4501 Quality Place • Mason, OH 45040 U.S.A Tel: 513-754-2000 Fax: 513-754-6015

TECHNICAL SPECIFICATION SHEET

4130 CR-MO WELDING WIRE

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NOMINAL CHEMICAL COMPOSITION:

Phosphorus	.035% max	Carbon	.28-.33%
Copper	.50% max	Manganese	.40-.60%
Other Totals	.50 % max	Sulfur	.040% max
Nickel	.50% max	Chromium	.80-1.10%
Iron	Balance	Molybdenum	.15-.25%
Silicon	.15-.60%		

**TYPICAL MECHANICAL PROPERTIES AS WELDED:
 (after quenching and tempering)**

Tensile Strength (psi)	Up to 170,000
Elongation % in 2"	7%
Yield Strength (psi)	Up to 166,000

APPLICATION:

4130 is a high strength, low alloy CR-MO steels used to weld alloys of similar composition. Use with a pre-heat and inter-pass temperature of 400°f minimum.

*** RECOMMENDED WELDING PARAMETERS: (NOT RECOMMENDED)**

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

<u>Wire Diameter</u>	<u>AMPS</u>	<u>VOLTS</u>	<u>ARGON/ 2% O₂</u>	<u>Wire Feed imp</u>
.030	135-230	24-28	25	390-670
.035	165-300	24-28	30	360-520
.045	200-375	24-30	30-35	210-390
1/16	275-500	24-32	40	150-360
3/32	300-600	24-33	50	75-125

GMAW(MIG) Parameters(DC Reverse Polarity) Electrode Positive short-circuiting transfer

<u>Wire Diameter</u>	<u>AMPS</u>	<u>VOLTS</u>	<u>CO₂ / Ar-CO₂ (cft)</u>	<u>Wire Feed imp</u>
.023	30-90	14-19	20-25	100-400
.030	40-145	15-21	20-25	160-380
.035	50-180	16-22	20-25	150-340
.045	75-250	17-22	20-25	100-220

⁽³⁾ Setting based on CO₂ for mild steel, Ar-CO₂ for low alloy steel

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

<u>Material</u>	<u>Tungsten dia. (1)</u>	<u>Filler Wire Size</u>	<u>Amps</u>	<u>Gas Cup</u>	<u>Argon (cfh)</u>
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. ← - - - Formatted: Bullets and Numbering

SPECIFICATION COMPLIANCE: MEETS AISI SPECIFACATIONS / INTERNAL, 4130 MODIFIED

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 (MSDS), 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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