



TECHNICAL SPECIFICATION SHEET

J.W. HARRIS CO., INC.
4501 QUALITY PLACE
MASON, OHIO 45040
TEL. (513) 754-2000
FAX, (513) 754-8778
www.jwharris.com

HARRIS WELCO 4130 CR-MO WELDING WIRE

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

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. J.W. Harris Co., Inc. and its affiliates shall have no liability in respect thereof.

NOMINAL COMPOSITION:

Carbon	0.28-0.33 %	Copper	0.50 % max.
Manganese	0.40-0.60 %	Silicon	0.15-0.60 %
Sulfur	0.040 % max.	Phosphorus	0.035 % max.
Nickel	0.50 % max.	Chromium	0.80-1.10 %
Iron	Balance	Molybdenum	0.15-0.25 %
	Others Total		0.50 % max.

TYPICAL MECHANICAL PROPERTIES AS WELDED:

(after quenching and tempering)

Tensile Strength(psi) up to 170,000

Yield Strength(psi) up to 166,000

Elongation % in 2" 7 %

APPLICATION:

Harris Welco 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.

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All statements, information and data given are believed to be accurate and reliable but are presented without guarantee, warranty or responsibility of any kind, expressed or implied.

For technical support and product information, visit our web site at www.jwharris.com

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*** RECOMMENDED WELDING PARAMETERS:**

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 ipm</u>
0.030	135-230	24-28	25	390-670
0.035	165-300	24-28	30	360-520
0.045	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>	⁽³⁾ <u>CO₂ /Ar-CO₂(cfh)</u>	<u>Wire Feed ipm</u>
0.023	30-90	14-19	20-25	100-400
0.030	40-145	15-21	20-25	160-380
0.035	50-180	16-22	20-25	150-340
0.045	75-250	17-22	20-25	100-220

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

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
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

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

SPECIFICATION COMPLIANCE : HARRIS WELCO INTERNAL , 4130 MODIFIED

J.W. Harris Co., Inc.	Fax	513-754-8778	Harris Welco	Fax	704-739-2801
4501 Quality Place	Tel.	513-754-2000	1051 York Road	Tel.	704-739-6421
Mason, Ohio 45040		800-733-4533	Kings Mountain, NC 28086		800-438-6476