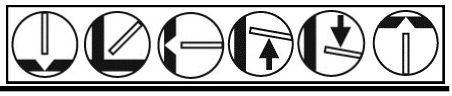
QCL-D2

AWS ER80S-D2, ER90S-G

WELDING POSITIONS:



FEATURES: **BENEFITS:**

• Smooth, stable arc through a wide range wire feed speeds	• Increased productivity, consistent feeding
• Excellent arc starts in all applications	• Less downtime, increased productivity
• Low spatter levels	• Reduced clean-up time
• Higher tensile and yield strengths	• High quality welds to match the requirements of the base metal
• Bead ties in smoothly to the weld joint	• Less grinding, attractive bead appearance
• Copper-less solid wire	• No risk of feeding issues due to copper flaking

APPLICATIONS:

- High temperature service piping
- Trailers
- Construction equipment
- Cranes

SHIELDING GAS: 100% Carbon Dioxide (CO_2), 75-92% Argon (Ar)/Balance Carbon Dioxide (CO_2) 25-50 cfh (9-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.035" (0.9 mm), 0.045" (1.2 mm)

RE-DRYING: Not recommended

STORAGE: Product should be stored in a dry, enclosed environment, and in its original intact packaging.

TYPICAL WELD METAL PROPERTIES* (Wire Chemistry):

Weld Metal Analysis (%)	100% CO_2	AWS Spec
Carbon (C)	0.08	0.07-0.12
Manganese (Mn)	1.67	1.60-2.10
Silicon (Si)	0.65	0.50-0.80
Phosphorus (P)	0.009	0.025 max
Sulphur (S)	0.012	0.025 max
Molybdenum (Mo)	0.47	0.40-0.60
Nickel (Ni)	0.08	0.15 max
Copper (Cu)	0.06	0.50†

† Copper content of wire and copper coating shall not exceed .5% max.

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	100% CO_2	AWS Spec
Tensile Strength	94,000 psi (652 MPa)	80,000 psi (552 MPa) Minimum
Yield Strength	79,000 psi (547 MPa)	68,000 psi (469 MPa) Minimum
Elongation % in 2" (50 mm)	23%	17%

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded):

CVN Temperatures	100% CO_2	AWS Spec
Avg. at -20°F (-29°C)	41 ft•lbs (56 Joules)	20 ft•lbs (27 Joules) Minimum

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Diameter Inches	(mm)	Weld Position	Amps	Volts	Wire-Feed Speed in/min	(m/min)	Deposition Rate lbs/hr	(kg/hr)	Contact Tip to Work Distance Inches	(mm)
0.045	(1.2)	All Positions	180	22	260	(6.6)	5.4	(2.4)	3/4	(19)
0.045	(1.2)	All Positions	230	24	380	(9.7)	7.9	(3.6)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	260	26	475	(12.1)	9.9	(4.5)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	305	27	590	(15.0)	12.2	(5.6)	3/4	(19)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **For out of position welding, short circuit or pulsed spray transfer modes must be used.**
- **See Above:** The information above was determined by welding using 75% Ar/25% CO_2 shielding gas with a flow rate between 25-50 cfh (9-24 l/min).

STANDARD DIAMETERS AND PACKAGES: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

Diameter Inches	(mm)	45-lb. (20.5kg) Spool
0.035	(0.9)	S301808-085
0.045	(1.2)	S301812-085

CONFORMANCES AND APPROVALS:
- **AWS A5.28,** ER80S-D2, ER90S-G
- **ASME SFA 5.28,** ER80S-D2, ER90S-G A-11, F-6
- **CWB,** 100% CO_2, B-G 55A 3 C G4M31 (ER80S-D2)

TECHNICAL QUESTIONS? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@hobartbrothers.com

Revision Date: 141126 (Replaces 140714)
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