

TM-121



AWS A5.20: E71T-11

WELDING POSITIONS:



FEATURES:

- Excellent operator appeal
- Versatile
- Self-shielded
- Excellent bead appearance
- Excellent slag removal

BENEFITS:

- Increases productivity
- Ideal for a variety of applications
- Suitable for welding outdoors
- Helps to ensure weld integrity, reduces re-work
- Makes clean-up easy and quick

APPLICATIONS:

- General fabrication
- Pre-fab construction
- Short assembly welds
- Machine parts
- Non-alloyed and fine grain steels
- Rail car repairs
- Light structurals [under 3/4" (19.1 mm) thick]
- Tanks

SLAG SYSTEM: Fast freezing, basic/fluoride type, flux-cored wire

SHIELDING GAS: None required

TYPE OF CURRENT: Direct Current Electrode Negative (DCEN)

STANDARD DIAMETERS: 1/16" (1.6 mm), 5/64" (2.0 mm)

RE-DRYING: Not recommended

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

TYPICAL WELD METAL CHEMISTRY* (Chem Pad):

Weld Metal Analysis	TM-121	AWS Spec
Carbon (C)	0.23	0.30
Manganese (Mn)	0.36	1.75
Silicon (Si)	0.15	0.60
Phosphorus (P)	0.009	0.03
Sulphur (S)	0.003	0.03
Aluminum (Al)	1.72	1.80

Note: AWS specification single values are maximums.

TYPICAL MECHANICAL PROPERTIES* [Aged 48 hrs @ 200°F (93°C)]:

Mechanical Tests	TM-121	AWS Spec
Tensile Strength	91,000 psi (627 MPa)	70,000-95,000 psi (490-670 MPa)
Yield Strength	64,000 psi (441 MPa)	58,000 psi (390 MPa) Minimum
Elongation % in 2" (50 mm)	21%	20% Minimum

TYPICAL CHARPY V-NOTCH IMPACT VALUES*: Not applicable

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with AWS A5.20 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

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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)	
1/16	(1.6)	All Position	160	18	70	(1.8)	2.1	(1.0)	3/4	(19)
1/16	(1.6)	All Position	190	18	100	(2.5)	3.2	(1.5)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	210	19	110	(2.8)	3.4	(1.6)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	260	20	145	(3.7)	4.8	(2.2)	3/4	(19)
5/64	(2.0)	All Position	185	16	55	(1.4)	2.6	(1.2)	1	(25)
5/64	(2.0)	All Position	190	18	60	(1.5)	2.8	(1.3)	1	(25)
5/64	(2.0)	All Position	220	18	70	(1.8)	3.5	(1.6)	1	(25)
5/64	(2.0)	Flat & Horizontal	265	21	90	(2.3)	4.7	(2.1)	1	(25)
5/64	(2.0)	Flat & Horizontal	315	22	124	(3.1)	7.1	(3.2)	1	(25)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **All positions include:** Flat, Horizontal, Vertical Up, Vertical Down, and Overhead.

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)		33-lb. (15kg) Spool	50-lb. (22.7kg) Coil
1/16	(1.6)	S222119-K29	—
5/64	(2.0)	S222125-K29	S222125-K14

CONFORMANCE AND APPROVALS:

- AWS A5.20, E71T-11
- AWS A5.20M, E491T-11
- ASME SFA 5.20, E71T-11
- ABS, E71T-11

CAUTION:

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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