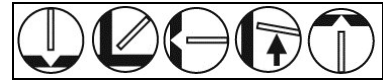


# Formula XL<sup>®</sup>-550 (H4)



AWS A5.20: E71T-1CJ H4, E71T-9CJ H4, E71T-12CJ H4

## WELDING POSITIONS:



### FEATURES:

- High impact toughness at low temperatures
- Low diffusible hydrogen weld deposit
- Excellent arc characteristics
- High-deoxidizer formulation
- Fast-freezing slag
- Easy slag removal

### BENEFITS:

- Resists cracking in severe applications
- Minimizes risk of underbead cracking
- Assists in producing smooth weld beads with uniform fusion
- Reduces surface preparation requirements, increases productivity
- Suitable for all-position welding
- Reduces clean-up time, minimizes risk of inclusion

### APPLICATIONS:

- Non-alloyed and fine grain steels
- Single or multi-pass welding
- Structural applications
- Earthmoving equipment
- Storage vessels
- Shipbuilding

**SLAG SYSTEM:** Fast-freezing, rutile type, flux-cored wire

**SHIELDING GAS:** 100% Carbon Dioxide (CO<sub>2</sub>), 35-50 cfh (17-24 l/min)

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**STANDARD DIAMETERS:** 0.045" (1.2 mm), 0.052" (1.4 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 (%)	100% CO <sub>2</sub>	AWS Spec
Carbon (C)	0.03	0.12
Manganese (Mn)	1.13	1.60
Silicon (Si)	0.20	0.90
Phosphorus (P)	0.006	0.030
Sulphur (S)	0.006	0.030
Nickel (Ni)	0.42	0.50

**Note:** AWS specification single values are maximums.

### TYPICAL DIFFUSIBLE HYDROGEN\*:

Hydrogen Equipment	100% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	3.3 ml/100g	4.0 ml/100g Maximum

### TYPICAL MECHANICAL PROPERTIES\*:

Mechanical Tests	As Welded		PWHT 13 Hrs. @ 1150°F (621°C)	
	100% CO <sub>2</sub>	AWS Spec	100% CO <sub>2</sub>	AWS Spec
Tensile Strength	83,000 psi (572 MPa)	70,000-90,000 psi (490-620 MPa)	81,000 psi (558 MPa)	Not Specified
Yield Strength	76,000 psi (524 MPa)	58,000 psi (390 MPa) Minimum	70,000 psi (483 MPa)	Not Specified
Elongation % in 2" (50 mm)	25%	22% Minimum	28%	Not Specified

### TYPICAL CHARPY V-NOTCH IMPACT VALUES\*:

CVN Temperatures	As Welded		PWHT 13 Hrs. @ 1150°F (621°C)	
	100% CO <sub>2</sub>	AWS Spec	100% CO <sub>2</sub>	AWS Spec
Avg. at 0°F (-20°C)	109 ft•lbs (148 Joules)	20 ft•lbs. (27 Joules) Minimum	—	Not Specified
Avg. at -40°F (-40°C)	90 ft•lbs (122 Joules)	20 ft•lbs. (27 Joules) Minimum "J" Requirements	77 ft•lbs (104 Joules)	Not Specified
Avg. at -50°F (-45°C)	85 ft•lbs (115 Joules)	Not Specified	71 ft•lbs (96 Joules)	Not Specified

\*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.

# Formula XL<sup>®</sup>-550 (H4)

Diameter		Weld Position	Amps	Volts	Wire-Feed Speed		Deposition Rate		Contact Tip to Work Distance	
Inches	(mm)				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.045	(1.2)	All Position	200	24	280	(7.1)	4.0	(1.8)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	225	26	355	(9.0)	5.0	(2.3)	1	(25)
0.052	(1.4)	All Position	225	24	285	(7.2)	6.7	(3.0)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	250	27	335	(8.5)	7.5	(3.4)	1	(25)

- **Maintaining a proper welding procedure - including preheat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **See Above:** This information was determined by welding with 100% Carbon Dioxide (CO<sub>2</sub>) shielding gas with a flow rate between 35-50 cfm (17-24 l/min).
- **All positions include:** Flat, Horizontal, Vertical Up, 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		10-lb. (4.5kg) Vacuum-Packed Spool	33-lb. (15kg) Vacuum-Packed Spool
Inches	(mm)		
0.045	(1.2)	—	S245112-053
0.052	(1.4)	S245115-032	S245115-053

## CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E71T-1CJ H4, E71T-9CJ H4, E71T-12CJ H4
- **AWS A5.20M**, E491T-1CJ H4, E491T-9CJ H4, E491T-12CJ H4
- **ASME SFA 5.20**, E491T-1CJ H4, E491T-9CJ H4, E491T-12CJ H4
- **ABS**, 100% CO<sub>2</sub>, 4YSA H5
- **CWB**, 100% CO<sub>2</sub>, E491T-9-H4
- **DNV**, 100% CO<sub>2</sub>, IV YMS H5

## 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](http://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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Revision Date: 140107 (Replaces 120718)

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