

AWS E71T-8J H8 / E491T-8J H8

**Fabshield® XLR-8™****DESCRIPTION:**

**Fabshield XLR-8** has been specifically designed for the demanding application of structural steel erection. This outstanding self-shielded, flux-cored wire produces a stable arc within a wide range of parameters. It is capable of depositing X-ray quality welds in all positions and is especially well suited for producing vertical-up welds at high current levels for increased productivity. It is designed for single and multiple pass applications and will produce flat weld beads with excellent slag removal. Fabshield XLR-8 will produce welds with excellent mechanical properties under a wide range of heat input. Usable under AWS D1.8 for use on Demand Critical welds. Designed to be used with constant voltage (CV) power sources.

**APPLICATIONS:**

Structural steel erection, heavy equipment repair, bridge construction, ship and barge construction.

**FEATURES:**

- Welds out of position at high currents
- Low Hydrogen weld deposit
- Excellent slag removal
- No shielding gas required
- High impact strength at low temperatures
- Excellent mechanical properties under a wide range of heat input.

**BENEFITS:**

- Increases productivity
- Provides increased resistance to cracking, promotes X-ray quality welds
- Increases productivity, eliminates slag entrapment
- Suitable for welding outdoors
- Resist cracking in severe applications
- Usable under AWS D1.8 for use on Demand Critical welds

**SHIELDING GAS:** None required

**TYPICAL WELD METAL PROPERTIES\* (Chem Pad):****Weld Metal Analysis**

Carbon (C)	0.19
Manganese (Mn)	0.51
Silicon (Si)	0.17
Phosphorus (P)	0.009
Sulphur (S)	0.006
Aluminum (Al)	0.51

**TYPICAL DIFFUSIBLE HYDROGEN\* (Gas Chromatography):** Less than 6.7 ml/100 g

**TYPICAL MECHANICAL PROPERTIES\***

(AGED 48 HR @ 200°F (93.3°C))

		Low Heat Input (Avg.30 kJ/in) (Fast cooling rate)	High Heat Input (Avg.80 kJ/in) (Slow cooling rate)
Tensile Strength:	84,100 psi (580 MPa)	87,500 psi (603 MPa)	78,800 psi (544 MPa)
Yield Strength:	67,600 psi (470 MPa)	68,500 psi (473 MPa)	62,800 psi (433 MPa)
Elongation % in 2" (50.8 mm)	25%	22.5%	28%

**TYPICAL CHARPY-V-NOTCH IMPACT VALUES:****AS WELDED**

		Low Heat Input (Avg.30 kJ/in) (Fast cooling rate)	High Heat Input (Avg.80 kJ/in) (Slow cooling rate)
Avg. at +70°F (+20°C)	N/A	77 ft•lbs (104 Joules)	73 ft•lbs (99 Joules)
Avg. at 0°F (-18°C)	N/A	60 ft•lbs (81 Joules)	50 ft•lbs (68 Joules)
Avg. at -20°F (-29°C)	40 ft•lbs (54 Joules)	Not required	Not required
Avg. at -40°F (-40°C)	31 ft•lbs (42 Joules)	Not required	Not required

**CONFORMANCES AND APPROVALS:**

- AWS A5.20/A5.20M, Class E71T-8J H8 • ASME SFA 5.20, Class E71T-8J H8
- ABS Grade 3SA, 3YSA H10 • CWB Class E491T-8J H8

\*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.



## WELDING DATA:

The information listed below was determined by welding performed with DCEN welding current.

Diameter		Weld Position	Amps	Volts*	Wire Feed Speed		Deposition Rate		Stickout		Deposition Efficiency (%)
Inches	mm				in/min	m/min	lbs/hr	(kg/hr)	±1/4"	±6.4	
1/16"	1.6	Flat, Horizontal	150	19	125	(3.17)	3.4	(1.54)	1"	(25.4)	60
		Flat, Horizontal	<b>240</b>	<b>22</b>	<b>280</b>	<b>(7.11)</b>	7.2	(3.27)	1"	(25.4)	76
		Flat, Horizontal	300	23	325	(8.25)	8.5	(3.86)	1"	(25.4)	76
		Vertical-Up	140	18	125	(3.17)	3.4	(1.54)	1"	(25.4)	65
		Vertical-Up	<b>200</b>	<b>21</b>	<b>187</b>	<b>(5.58)</b>	5.7	(2.59)	1"	(25.4)	72
		Vertical-Up	250	23	270	(6.85)	7.0	(3.18)	1"	(25.4)	78
		Overhead	150	18	145	(3.68)	3.5	(1.59)	1"	(25.4)	60
		Overhead	<b>225</b>	<b>22</b>	<b>210</b>	<b>(5.33)</b>	5.2	(2.36)	1"	(25.4)	76
		Overhead	260	23	250	(6.35)	6.5	(2.95)	1"	(25.4)	72
.072"	1.8	Flat, Horizontal	160	18	100	(2.54)	3.1	(1.41)	1"	(25.4)	69
		Flat, Horizontal	<b>290</b>	<b>22</b>	<b>200</b>	<b>(5.08)</b>	7.2	(3.27)	1"	(25.4)	80
		Flat, Horizontal	350	23	280	(7.11)	11.3	(5.13)	1"	(25.4)	81
		Vertical-Up	145	18	90	(2.28)	3.0	(1.36)	1"	(25.4)	69
		Vertical-Up	<b>250</b>	<b>22</b>	<b>170</b>	<b>(4.31)</b>	5.9	(2.68)	1"	(25.4)	79
		Vertical-Up	280	23	200	(5.08)	7.2	(3.27)	1"	(25.4)	80
		Overhead	185	18	125	(3.17)	3.9	(1.77)	1"	(25.4)	69
		Overhead	<b>260</b>	<b>22</b>	<b>170</b>	<b>(4.31)</b>	5.9	(2.68)	1"	(25.4)	79
		Overhead	270	22	200	(5.08)	7.2	(3.27)	1"	(25.4)	80
5/64"	2.0	Flat, Horizontal	190	18	100	(2.54)	3.9	(1.77)	1.25"	(31.7)	75
		Flat, Horizontal	<b>265</b>	<b>22</b>	<b>165</b>	<b>(4.19)</b>	6.2	(2.81)	1.25"	(31.7)	75
		Flat, Horizontal	350	23	225	(5.71)	9.3	(4.22)	1.25"	(31.7)	74
		Vertical-Up	145	18	100	(2.54)	3.9	(1.77)	1.25"	(31.7)	75
		Vertical-Up	<b>240</b>	<b>22</b>	<b>150</b>	<b>(3.81)</b>	5.9	(2.68)	1.25"	(31.7)	75
		Vertical-Up	280	23	200	(5.08)	8.0	(3.63)	1.25"	(31.7)	76
		Overhead	185	18	125	(3.17)	4.2	(1.91)	1"	(25.4)	75
		Overhead	<b>260</b>	<b>22</b>	<b>140</b>	<b>(3.55)</b>	5.6	(2.54)	1"	(25.4)	75
		Overhead	270	22	200	(5.08)	8.0	(3.63)	1"	(25.4)	75

\*Designates voltage at work piece.

**Bold** - Optimum Parameters

## 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.

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

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