ULTRACORE® FC 308L

Stainless ▪ AWS E308T0-1, E308T0-4, E308LT0-1, E308LT0-4

KEY FEATURES

- Superior weld performance and enhanced operator appeal
- Q2 Lot® - Certificate showing actual deposit composition and ferrite number (FN) by ferrite scope available online
- ProTech® hermetically sealed packaging

WELDING POSITIONS

Flat & Horizontal

SHIELDING GAS

100% CO_2
75% Argon / 25% CO_2

CONFORMANCES

AWS A5.22/A5.22M: 2012 & ASME SFA-A5.22:	E308LT0-1, E308LT0-4, E308T0-1, E308T0-4
ABS:	E308LT0-1, E308LT0-4, E308T0-1, E308T0-4
CWB/CSA W48-06:	E308LT0-1, E308LT0-4

TYPICAL APPLICATIONS

- 304L and other common18/8 stainless steels
- Nitrogen bearing 304LN and titanium stabilized 321
- General fabrication including piping, tanks and pressure vessels

DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool (Vacuum Sealed Foil Bag)
0.045 (1.1)	ED033004
1/16 (1.6)	ED033005

MECHANICAL PROPERTIES[1] – *As Required per AWS A5.22/A5.22M: 2012*

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Requirements				
AWS E308T0-1, E308T0-4	Not Specified	520 (75) min	35	Not Specified
AWS E308LT0-1, E308LT0-4	Not Specified	550 (80) min	min	Not Specified
Test Results[3] - As-Welded				
with 100% CO_2	405 (59)	580 (84)	43	7-11
with 75% Ar/25% CO_2	440 (64)	605 (88)	37	8-11

DEPOSIT COMPOSITION[1] – *As Required per AWS A5.22/A5.22M: 2012*

	%C[4]	%Mn	%Si	%S	%P
Requirements - AWS E308LT0-1, E308LT0-4	0.04 max	0.5-2.5	1.0 max	0.03 max	0.04 max
Test Results[3] - As-Welded					
with 100% CO_2	≤0.03	1.2-1.3	0.60-0.70	≤0.02	≤0.02
with 75% Ar/25% CO_2	≤0.03	1.2-1.3	0.68-0.77	≤0.01	≤0.02

	%Ni	%Cr	%Mo	%Cu
Requirements - AWS E308LT0-1, E308LT0-4	9.0-11.0	18.0-21.0	0.5 max	0.5 max
Test Results[3] - As-Welded				
with 100% CO_2	9.3-9.7	18.2-18.5	≤0.27	≤0.31
with 75% Ar/25% CO_2	9.3-9.7	18.7-18.9	≤0.27	≤0.27

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[5] mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Melt-Off Rate kg/hr (lb/hr)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)
0.045 in (1.1 mm), DC+ 75% Ar/25% CO_2	19 (3/4)	6.4 (250)	23-26	145	2.7 (5.9)	2.3 (5.2)	88
	19 (3/4)	8.9 (350)	24-27	170	3.7 (8.3)	3.3 (7.3)	88
	19 (3/4)	11.4 (450)	25-28	205	4.8 (10.6)	4.2 (9.3)	88
1/16 in (1.6 mm), DC+ 75% Ar/25% CO_2	25 (1)	3.6 (140)	23-26	175	2.8 (6.3)	2.5 (5.4)	86
	25 (1)	6.4 (250)	24-27	260	5.1 (11.1)	4.4 (9.7)	87
	25 (1)	7.6 (300)	25-28	285	9.1 (20.0)	7.9 (17.4)	87

[1]Typical all weld metal, DC+. [2]Measured with 0.2% offset. [3]See test results disclaimer [4]Requirement for E308T0-1 and E308T0-4 is 0.08% max. carbon.
[5]To estimate ESO, subtract 1/4 in (6.0 mm) from CTWD. NOTE: Increase Voltage by 2V when using 100% CO_2

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m³ maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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