LINCOLN® RED MAX® 307_MOD

Stainless ▪ Similar to AWS ER307

Key Features

- Austenitic stainless steel
- 7% Manganese (Mn) increases resistance to hot cracking between dissimilar steels
- Q2 Lot® - Certificates showing actual wire composition and calculated ferrite number (FN) available online

Welding Positions

All

Conformances

ISO 14343-A: G 18 8 Mn

**Similar to ER307*

Typical Applications

- Automotive exhaust systems
- Armor Plate (military)
- Designed for joining dissimilar stainless steels
- Work hardening manganese steel

Shielding Gas

Short Circuiting Transfer
90% He / 7.5% Argon / 2.5% CO_2
Axial Spray Transfer
98% Argon / Balance O_2 or CO_2

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool	500 lb (227 kg) Accu-Trak® Drum	500 lb (227 kg) Accu-Pak® Box
0.035 (0.9)	ED036933	ED036936	ED036937
0.045 (1.1)	ED036934	ED036938	ED036939
1/16 (1.6)	ED036935	ED036940	ED036941

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %
Typical Results[3] - As-Welded	434 (63)	627 (91)	38

WIRE COMPOSITION[1]

	%C	%Mn	%Si	%Cr	%Ni	%S	%P
Typical Results[2]	0.08	7.1	0.80	18.8	8.6	0.009	0.023

[1]Typical wire composition. [2]See test results disclaimer

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[6] mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
Short Circuit Transfer					
0.035 in (0.9 mm), DC+ 90% He / 7.5% Ar / 2.5% CO_2	13 (1/2)	3.0 (120)	20-21	60	0.9 (2.0)
	13 (1/2)	4.6 (180)	21-23	90	1.4 (3.0)
	13 (1/2)	5.8 (230)	22-24	105	1.8 (3.9)
	13 (1/2)	7.6 (300)	23-25	130	2.3 (5.0)
	13 (1/2)	8.9 (350)	24-26	145	2.7 (5.9)
	13 (1/2)	10.2 (400)	25-27	155	3.1 (6.7)
0.045 in (1.1 mm), DC+ 90% He / 7.5% Ar / 2.5% CO_2	13 (1/2)	2.5 (100)	20-21	80	1.1 (2.8)
	13 (1/2)	3.2 (125)	21-22	110	1.5 (3.5)
	13 (1/2)	3.8 (150)	21-23	130	1.7 (4.2)
	13 (1/2)	4.4 (175)	22-24	145	2.0 (4.8)
	13 (1/2)	5.6 (220)	23-25	170	2.6 (6.1)
	13 (1/2)	6.4 (250)	24-26	180	2.9 (6.9)
	13 (1/2)	7.0 (275)	25-27	190	3.2 (7.6)
Axial Spray Transfer					
0.035 in (0.9 mm), DC+ 98% Ar /2% O_2	13 (1/2)	10.2 (400)	23-24	190	3.1 (6.7)
	13 (1/2)	10.8 (425)	24-25	200	3.3 (7.1)
	13 (1/2)	11.4 (450)	24-25	210	3.5 (7.5)
	13 (1/2)	12.1 (475)	25-26	220	3.7 (8.0)
0.045 in (1.1 mm), DC+ 98% Ar /2% O_2	13 (1/2)	6.1 (240)	22-24	195	2.8 (6.6)
	13 (1/2)	6.6 (260)	23-25	215	3.0 (7.2)
	13 (1/2)	7.6 (300)	24-26	245	3.5 (8.3)
	13 (1/2)	8.3 (325)	25-27	250	3.8 (9.0)
	13 (1/2)	9.1 (360)	25-27	275	4.2 (10.0)

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer. [4] AWS Requirement for ER308Si is 0.08% max carbon. [5]Included in 0.50% max. for other elements not specified.
[6]To estimate ESO, subtract 1/8 in (3.2 mm) from CTWD.

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

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

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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