

INNERSHIELD® NR®-152

Mild Steel, All Position ■ AWS E71T-14

KEY FEATURES

- Designed for high speed welding of specially coated steels
- Soft, consistent arc
- Porosity resistant
- Excellent overlapping capabilities
- Ideal for robotic applications

WELDING POSITIONS

All

MAXIMUM PLATE THICKNESS

Diameter - in (mm)	Maximum Plate Thickness - in (mm)
1/16 (1.6)	3/16 (4.8)
0.068 (1.7)	3/16 (4.8)

CONFORMANCES

AWS A5.20/A5.20M:	E71T-14
ASME SFA-A5.20:	E71T-14
ISO	T 49T14-1 N S G

TYPICAL APPLICATIONS

- Single pass welding on thicknesses from 0.8 mm - 4.8 mm (0.030 in - 3/16 in)
- Continuous welding on galvanized or zinc coated carbon steel
- Spot or short intermittent welds
- Automotive
- Transportation

WARNING

- NR-152 is NOT recommended for welding multiple passes.

DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	50 lb (22.7 kg) Coil	500 lb (227 kg) Speed-Feed® Drum	500 lb (227 kg) Accu-Trak® Drum
0.045 (1.1)	EDS01702	ED012185 ED012186	ED024301	ED028123 ED029066
0.062 (1.6)				
0.068 (1.7)				

MECHANICAL PROPERTIES⁽¹⁾

	Transverse Tensile Strength MPa (ksi)	Longitudinal Bend Test	Hardness Rockwell B
Requirements - AWS E71T-14	480 (70) min	180° over 3/4 in Radius / No openings exceeding 1/8 in	-
Typical Results⁽²⁾	480-550 (70-80)	Passed	93

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%S	%P	%Al
Requirements - AWS E71T-14	Not Specified					
Typical Results⁽²⁾	0.25-0.30	0.83-1.04	0.20-0.23	0.006-0.01	0.005-0.02	1.08-1.38

TYPICAL OPERATING PROCEDURES

Diameter, Polarity	CTWD 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 (%)
1/16 in (1.6 mm), DC-	16 (5/8)	0.8 (30)	13-14	90	0.5 (1.3)	0.5 (1.2)	92
		1.0 (40)	14-15	115	0.8 (1.8)	0.7 (1.6)	88
		1.3 (50)	15-16	140	0.9 (2.2)	0.9 (2.0)	90
		1.8 (70)	16-17	185	1.4 (3.1)	1.3 (2.8)	90
		2.8 (110)	19-20	265	2.1 (4.8)	2.0 (4.4)	91
0.068 in (1.7 mm), Twinarc, DC-	19 (3/4)	0.8 (30)	13-14	68	0.7 (1.6)	0.6 (1.4)	87
		1.0 (40)	13-14	95	0.9 (2.2)	0.9 (1.9)	86
		1.3 (50)	14-15	120	1.2 (2.7)	1.1 (2.4)	88
		1.5 (60)	15-16	145	1.4 (3.3)	1.3 (2.9)	87
		2.0 (80)	16-17	190	1.9 (4.4)	1.8 (3.9)	88
2.8 (110)	20-21	240	2.7 (6.0)	2.4 (5.4)	90		

⁽¹⁾Typical all weld metal. ⁽²⁾See test results disclaimer

NOTE: The preferred drag angle is 15°, however, NR-152 is capable of welding at zero drag angle, facilitating easy fixturing in automatic applications.

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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