

Innershield® NR-233



Innershield® NR233 is a good choice for training or novice welders while also meeting the mechanical property requirements listed in AWS D1.8. It is recommended for vertical up and overhead fillet and groove welds. This wire is easy to use and has high deposition rates making it a “win-win” wire for many applications. For easy out-of-position operability and impact properties capable of exceeding 27 J at -29°C – choose Innershield® NR233.

CONFORMANCE

AWS A5.20/5.20M: 2005 E71T-8

ASME SFA-5.20 E71T-8

FEMA 353

AWS D1.8



TYPICAL APPLICATIONS

- Seismic structural steel erection.
- General structural steel erection.
- Ship and barge fabrication.
- Vertical up and overhead fillets and groove welds.

Note: Innershield® K126 gun Assembly requires a specific gun tube assembly for better wire feeding of Innershield® NR233 wire.

WELDING POSITIONS



KEY FEATURES

- Meets FEMA 353 and AWS D1.8 lot waiver requirements
- Impact properties tested at -30°C – Exceed minimum requirement.
- Easy to operate – Accommodates low operator skill in training.

Innershield® NR-233**DIAMETERS / PACKAGING**

Diameter (mm)	Package Type (kg)	Pallet Weight (kg)
1.6	11.5kg Spool	828
1.8	11.5kg Spool	828
2.0	11.5kg Spool	828

MECHANICAL PROPERTIES⁽¹⁾ - As required per AWS A5.20M

	Yield Strength (Mpa)	Tensile Strength (Mpa)	Elongation (%)	Charpy V-Notch (J) @-30℃
AWS Requirements E71T-8	390Min.	490-670	22Min.	27Min.
Typical Values	485	600	27.5	52

⁽¹⁾ The strength and elongation properties reported were obtained from a .505" tensile specimen artificially aged at 220°F (104°C) for 48 hours, as permitted by AWS A5.20-95. A naturally aged tensile specimen may take months to achieve the specified properties. See AWS A5.20-95, paragraph A8.3. The time required for the natural aging of weld deposits is dependent upon ambient conditions weldment geometry, the metallurgical structure of the weld deposit and other factors.

CHEMICAL COMPOSITION - As Required Per AWS A5.20/A5.20M

	C	Mn	Si	S	P	Al
AWS Requirements E71T-8 Max.	0.30	1.75	0.60	0.03	0.03	1.8
Typical Values	0.15	0.50	0.24	0.005	0.011	0.90

TYPICAL OPERATING PROCEDURES

Diameter Polarity CTWD	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 (%)
1.6mm DC-25mm	3.8(150)	17-19	220	2.4(5.3)	1.9(4.2)	80
	5.1(200)	19-21	245	3.2(7.1)	2.5(5.4)	76
	6.4(250)	21-23	270	4.0(8.9)	3.0(6.6)	74
	7.6(300)	23-25	295	4.7(10.4)	3.5(7.7)	75
	8.9(350)	25-27	315	5.6(12.3)	4.3(9.4)	77
1.8mm DC-19-25mm	2.5(100)	17-18	184	2.0(4.5)	1.6(3.6)	80
	3.8(150)	18-19	250	3.1(6.7)	2.5(5.4)	80
	5.1(200)	20-21	295	4.0(8.9)	3.2(7.1)	81
	6.4(250)	22-23	330	5.1(11.2)	4.0(8.9)	79
	7.6(300)	23-24	355	6.1(13.4)	4.8(10.6)	79
2.0mm DC-19-25mm	2.3(90)	18-19	210	4.9(2.2)	1.8(4.1)	82
	3.2(125)	19-20	260	7.0(3.2)	2.6(5.6)	81
	3.8(150)	20-21	300	8.4(3.8)	3.0(6.6)	80
	5.1(200)	21-22	340	11.2(5.1)	4.1(9.0)	81
	6.1(240)	22-23	380	13.3(6.1)	4.9(10.8)	81

Customer Assistance Policy

The business of 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 advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customers particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has not been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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

Authorized Distributor:**THE SHANGHAI LINCOLN ELECTRIC CO., LTD**

No.195, Lane 5008, Hu Tai Road, Shanghai China 201907
TEL:86-21-6673 4530 FAX:86-21-6602 6621

www.lincolnelectric.com.cn

LINCOLN®
ELECTRIC
THE WELDING EXPERTS®