

# Outershield® 91Ni1-HSR

## TOP FEATURES

- Outstanding mechanical properties and purity of weld metal.
- Good weldability, also in vertical up (3G).
- Exceptional mechanical properties (CVN >47J at -50°C).
- Superior product consistency with optimal alloy control.

## TYPICAL APPLICATIONS

- Welding of 550MPa steels
- PWHT applications
- Steel construction

## CLASSIFICATION

AWS A5.29 E91T1-GM  
EN ISO 18276-A T 55 4 1NiMo P M 2 H5

## CURRENT TYPE

DC+

## WELDING POSITIONS

All except vertical down

## SHIELDING GASES (ACC. EN ISO 14175)

M21 Mixed gas Ar+ 15-25% CO<sub>2</sub>  
Flow rate 15-25 l/min

## CHEMICAL COMPOSITION (WEIGHT %), TYPICAL, ALL WELD METAL

Shielding gas	C	Mn	Si	P	S	Ni	Mo	HDM
M21	0,05	1,4	0,2	0,013	0,010	0,95	0,4	3 ml/100 g

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Shielding gas	Condition*	Yield strength (MPa)	Tensile strength (MPa)	Elongation (%)	Impact ISO-V (J) -40°C
Required: AWS A5.29			min. 540	620-760	min. 17	
EN ISO 18276-A			min. 550	640-820	min. 18	min. 47
Typical values	M21	AW	640	700	19	60

\* AW = As welded

## PACKAGING AND AVAILABLE SIZES

Wire diameter (mm)	Packaging	Weight (kg)	Item number
1.2	SPOOL (S300)	16.0	942673N

## 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

Safety Data Sheets (SDS) are available here:



Subject to Change – The information is accurate to the best of our knowledge at the time of printing.  
Please refer to [www.lincolnelectric.eu](http://www.lincolnelectric.eu) for any updated information.