

# Supercore™ F91

## TOP FEATURES

- High deposition rates.
- Fast freezing slag for out of position welding

## TYPICAL APPLICATIONS

- Power Plants
- Piping
- Turbine Castings
- Oil Refineries

## CLASSIFICATION

AWS A5.29 E91T1-B9C/M-H4  
 AWS A5.36 E91T1-C1PZ-B91-H4 or E91T1-M21PZ-B91-H4  
 EN ISO 17634-B T 69T1-1M-9C1MV  
 (depending on shielding gas)

## CURRENT TYPE

DC+

## WELDING POSITIONS

All

## SHIELDING GASES (ACC. EN ISO 14175)

M21 Mixed gas Ar+ 15-25% CO<sub>2</sub>  
 C1 Active gas 100% CO<sub>2</sub>  
 Flow rate 15-25 l/min

## CHEMICAL COMPOSITION (WEIGHT %), WELD METAL

	C	Mn	Si	S	P	Cr	Ni	Mo	Nb	V	N	Cu	Al	Mn +Ni
Min.	0.08	0.40				8.0		0.85	0.02	0.15	0.02			
Max.	0.13	1.00	0.50	0.01	0.01	10.0	0.50	1.2	0.07	0.25	0.07	0.15	0.04	1.00
Typical	0.1	0.7	0.3	0.008	0.008	9.0	0.2	1.0	0.04	0.2	0.05	0.05	0.01	0.9

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Properties after PWHT	Min.	Typical (760°C/2h)				Typical (760°C/4h) 20°C
		20°C	+566°C	+600°C	+650°C	
Tensile strength (MPa)	690	745	450	420	396	720
0.2% Proof strength (MPa)	565	620	360	288	245	600
Elongation (%) 4d	17	20	21	27	29	23
	5d	14	18	20	25	20
Reduction of area		60	73	81	85	62
Impact ISO-V (J) +20°C		45				55
Hardness (HV)		260				250

## PACKAGING AND AVAILABLE SIZES

Wire diameter (mm)	Packaging	Weight (kg)	Item number
1.2	SPOOL (S300)	15.0	SCF91-12

## 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.