

## SUPERCORE 309L &amp; SUPERCORE 309LP

FCAW

## RUTILE FLUX CORED WIRES

## PRODUCT DESCRIPTION

Flux cored wires – the wires are made with an austenitic stainless steel sheath and rutile flux system. Supercore 309L combines easy operability, high deposit quality and exceptional weld bead appearance for downhand and HV welding.

## CLASSIFICATIONS

	SUPERCORE 309L	SUPERCORE 309LP
AWS A5.22M	E309LT0-1/4	E309LT1-1/4
ISO 17633-A	T 23 12 L R C/M 3	T 23 12 L R C/M 2
ISO 17633-B	TS309L-F C1/M21 0	TS309L-F C1/M21 1
Approvals	TÜV, LRS	TÜV, LRS, ABS, DNV

## ASME IX QUALIFICATION

QW432	F-No 6
QW442	A-No 8

## CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	FN
Min.	--	0.5	--	--	--	22.0	12.0	--	--	12
Max.	0.04	2.0	1.0	0.025	0.030	25.0	14.0	0.3	0.3	22
Typical	0.03	1.3	0.6	0.02	0.02	24	12.5	0.1	0.1	15

## ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical
Tensile strength (MPa)	520	560
0.2% proof strength (MPa)	320	445
Elongation (%) 4d	30	40
5d	25	36
Reduction of area (%)	--	52
Impact ISO-V(I) +20°C	--	65 *
-110°C	--	55 *
Hardness (HV)	--	205

\* These values are for Supercore 309LP. Values for Supercore 309L are 45J at +20°C, 40J at -20°C.

## OPERATING PARAMETERS

**Shielding gas:** Either 80%Ar-20%CO<sub>2</sub> or 100% CO<sub>2</sub> shielding gas at 20-25l/min. Proprietary gases may be used but argon should not exceed 85%.

**Current:** DC+ve ranges as below for Ar-20%CO<sub>2</sub>. Welding with 100%CO<sub>2</sub> requires approx 3V higher:

Diameter (mm)	amp-volt range	typical	stickout
1.2	120 – 280A, 22 – 34V	180A, 29V	15 – 20mm
1.2P	120 – 250A, 22 – 32V	150A, 25V	15 – 20mm

## PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
0.9	12.5	S300	SC309L-09
1.2	5	S200	SC309LMD-12
1.2	15	S300	SC309L-12
1.2	15	S300	SC309LP-12
1.6	15	S300	SC309L-16

## FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr <sup>3</sup>	Cr <sup>6</sup>	Cu	F	OES (mg/m <sup>3</sup> )
9	4	1	6	1	<1	15	1.2

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to [www.specialalloys.eu](http://www.specialalloys.eu) for any updated information.