

## SUPERCORE 316L &amp; SUPERCORE 316LP

FCAW

## RUTILE FLUX CORED WIRES

STAINLESS STEELS

## PRODUCT DESCRIPTION

Flux cored wires – the wires are made with an austenitic stainless steel sheath and rutile flux system. **Supercore 316L** combines easy operability, high deposit quality and exceptional weld bead appearance for downhand and horizontal-vertical welding. **Supercore 316LP** is designed for all-positional welding including fixed pipework. Metal recovery is about 90% with respect to the wire.

The Supercore 316L wire is not suitable for applications requiring PWHT or solution annealing – for these applications, it is recommended that Supercore 316LP is used.

## CLASSIFICATIONS

	Supercore 316L	Supercore 316LP
AWS A5.22M	E316LT0-1/4	E316LT1-1/4
ISO 17633-A	T 19 12 3 L R C/M 3	T 19 12 3 L P C/M 2
ISO 17633-B	TS316L-F C1/M21 0	TS316L-F C1/M211
Approvals (1.2 & 1.6mm)	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	0.2	--	--	17.0	11.0	2.5	--	3
Max.	0.04	2.0	1.0	0.025	0.030	20.0	13.0	3.0	0.3	12
Typical	0.03	1.3	0.5	0.02	0.02	18	12.5	2.7	0.1	6

## ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical
Tensile strength (MPa)	510	580
0.2% proof strength (MPa)	320	440
Elongation (%) 4d	30	40
	5d	38
Reduction of area (%)	--	50
Impact ISO-V(I) +20°C	--	70
	-110°C	--
Hardness cap/mid (HV)	--	200/210

## 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
0.9 (Supercore 316L only)	75 – 170A, 20 – 30V	120A, 26V	15 – 20mm
1.2	120 – 280A, 21 – 35V	180A, 28V	15 – 20mm
1.2P	120 – 250A, 20 – 32V	160A, 26V	15 – 20mm
1.6	200 – 350A, 26 – 36V	250A, 30V	15 – 25mm

## PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
0.9	15	S300	SC316L-09
1.2	15	S300	SC316L-12
1.2	15	S300	SC316LP-12
1.6	15	S300	SC316L-16

## FUME DATA (WT % TYPICAL) (WT % TYPICAL)

Fe	Mn	Ni	Cr <sup>3</sup>	Cr <sup>6</sup>	Cu	F	OES (mg/m <sup>3</sup> )
13.5	1.5	1.5	7.5	1	<1	11	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.