

## Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T Z19 13 4 L R M21 3	TS317L-F M21 0	E317LT0-4
T Z19 13 4 L R C1 3	TS317L-F C1 0	E317LT0-1

## Characteristics and typical fields of application

This product achieves high productivity and is easy to operate providing excellent welding characteristics, self releasing slag, almost no spatter formation and temper discoloration, smooth weld finish and safe penetration. Increased travel speeds as well as little demand for cleaning and pickling provide considerably savings in time and money. It is designed for welding of corrosion resistant CrNiMo-steels in the flat and horizontal position, horizontal/vertical position as well as the slightly vertical-down position (1 o'clock).

It satisfies the high demands of offshore fabricators, shipyards building chemical tankers as well as the chemical / petrochemical, pulp and paper industries. Suitable for service temperatures from -60 to +300°C.

The weld metal exhibits resistance against pitting corrosion and intergranular corrosion resistance (ASTM A 262 / Practise E) up to 300 °C For corrosion resistant single claddings the wire should be used under mixture gas (Argon + 15 – 25 % CO<sub>2</sub>).

## Base materials

CrNiMo-steels with increased Mo-content like grade AISI 316L or corrosion resistant claddings on mild steels

1.4434 X2CrNiMoN18-12-4, 1.4435 X2CrNiMo18-14-3, 1.4438 X2CrNiMo18-15-4,  
1.4429 X2CrNiMoN17-13-3,  
AISI 316L, 316LN, 317 L, 317LN

## Typical analysis of all weld metal (wt.-%)

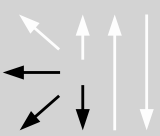
	C	Si	Mn	Cr	Ni	Mo		FN
wt.-%	≤ 0.035	0.7	1.3	18.8	13.1	3.4		3-8

## Mechanical properties of all-weld metal

Condition	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-60 °C
u	<b>420</b> (≥ 350)	<b>570</b> (≥ 550)	<b>32</b> (≥ 25)	<b>50</b>	<b>45</b> (≥ 32)

u untreated, as welded – shielding gas Ar + 18 % CO<sub>2</sub>

## Operating data

	Polarity:	Shielding gases:	Redrying:	ø (mm)	Amps A	Voltage V
	DC ( + )	Argon + 15 – 25 % CO <sub>2</sub>  100 % CO <sub>2</sub>	possible 150°C / 24 h	1.2	125 – 280	20 – 34

Welding with standard GMAW-facilities possible, slightly trailing torch position (angel appr. 80°), when using 100% CO<sub>2</sub> as shielding gas it is necessary to increase the voltage by 2 V.

The gas flow should be 15-18 l/min