

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 19 9 L P M21 1	TS308L-F M21 1	E308LT1-4
T 19 9 L P C1 1	TS308L-F C1 1	E308LT1-1

Characteristics and typical fields of application

Rutile flux cored welding wire, with controlled weld metal ferrite content (3-6 FN), particularly for good cryogenic toughness and lateral expansion down to -196 °C like specified for LNG applications. The slag system of the wire provides excellent positional welding characteristics and fast travel speeds.

Base materials

1.4306 X2CrNi19-11, 1.4301 X5CrNi18-10, 1.4311 X2CrNi18-10, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
AISI 304, 304L, 307LN, 302, 321, 347; ASTM A157 Gr. C9; A320 Gr. B8C or D

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

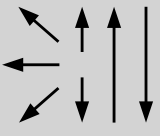
	C	Si	Mn	Cr	Ni		FN
wt.-%	0.03	0.6	1.4	19.3	10.9		3-6

Mechanical properties of all-weld metal

Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J		Lateral expansion mm
	MPa	MPa	%	+20 °C	-196 °C	-196 °C
u	390 (≥ 350)	550 (≥ 520)	40 (≥ 35)	78	45 (≥ 32)	≥ 0.38

u untreated, as welded – shielding gas Ar + 18 % CO₂

Operating data

	Polarity:	Shielding gases:	Re-drying:	ø (mm)	Amps A	Voltage V
	DC (+)	M1 – M3, C1	possible 150 °C / 24 h	1.2 1.6	100 – 220 175 – 260	20 – 31 21 – 29

Welding with standard GMAW-facilities possible, slightly trailing torch position (angel appr. 80°), slight weaving is recommended for positional welding; when using 100 % CO₂ as shielding gas it is necessary to increase the voltage by 2 V; the gas flow should be 15 – 18 l/min

Approvals

TÜV (09117.), CE