

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22	Mat. No.
T 19 9 L P M21 1 T 19 9 L P C1 1	TS308L-FB1	E308LT1-4 E308LT1-1	1.4316

Characteristics and typical fields of application

Thermanit 308 L-PW is an austenitic CrNi flux cored wire with rutile fast freezing slag. It is suited for GMAW welding with mixed gas M21 and C1 acc. to EN ISO 14175 in all positions, on matching and similar, non stabilized and stabilized, corrosion resistant CrNi(N) steels/cast steel grades.

The weld metal is stainless and provides good resistance to nitric acid, resistance to intercrystalline corrosion – wet corrosion up to 350 °C (662 °F), cold toughness down to –196 °C (–320.8 °F) and resistance to scaling up to 800 °C (1472 °F). Thermanit 308 L-PW provides very fine and smooth bead appearance and almost spatter free welding behaviour. Very good slag detachability and notch free, clean seams with low annealing colouring, easy to clean and pickle. Root welding is proven on ceramic backing strips.

Base materials

1.4301 – X5CrNi18-10	1.4541 – X6CrNTi18-10
1.4306 – X2CrNi19-11	1.4550 – X6CrNiNb18-10
1.4308 – GX5CrNi19-10	1.4552 – GX5CrNiNb19-11
1.4311 – X2CrNi18-10	1.4948 – X6CrNi18-10

And also covered materials acc. to VdTÜV-Kennblatt 1000.

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

	C	Si	Mn	Cr	Ni	Gas
wt-%	0.03	0.7	1.5	19.8	10.5	M21

Structure: Austenite with part ferrite

Mechanical properties of all-weld metal

Heat-treatment	Shielding gas	Yield strength R _{p0.2}	Yield strength R _{p1.0}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
		MPa	MPa	MPa	%	+20 °C	–196 °C
aw	M21	350	380	520	35	47	32

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21, C1	ø (mm) 1.2	Spool B300	Amps A 125 – 230	Voltage V 22 – 28
		Consumption: 15 – 18 l/min				

Approvals

TÜV (09770), DB (43.132.23), GL, CE