Thermanit TG 308 L

Flux cored wire, high-alloyed, rutile

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22	Mat. No.
T 19 9 L R M21 3 T 19 9 L R C1 3	TS308L-FB0	E308LT0-4 E308LT0-1	1.4316

Characteristics and typical fields of application

Thermanit TG 308 L is an austenitic CrNi flux cored wire with rutile slag characteristic. It is suited for GMAW welding with mixed gas M21 and C1 acc. to EN ISO 14175 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 and 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).

Weldable almost spatter free and due to the very slow freezing rutile slag the weld metal shows very fine and smooth bead appearance. Very good slag detachability and notch free seams with low annealing colouring, easy to clean and pickle. The root welding is proven on ceramic backing bar.

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 – X2CrNiN18-10	1.4948 – X6CrNi18-10	

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

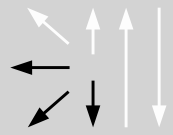
	C	Si	Mn	Cr	Ni	Gas
wt-%	0.03	0.7	1.5	19.8	10.5	M21

Structure: Austenite with part Ferrite

Mechanical properties of all-weld metal

Heat-treat-ment	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:	Shielding gas:	ø (mm)	Spool	Amps A	Voltage V
DC (+)	(EN ISO 14175) M21, C1 Consumption: 15 – 20 l/min	0.9 1.2	B300 B300	100 – 180 120 – 280	18 – 29 20 – 30

Approvals

TÜV (07538), DB (43.132.15), GL, CE