

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22	Mat. No.
T 18 8 Mn R M21 3 T 18 8 Mn R C1 3	TS307-FB0 (mod.)	E307T0-G	1.4370

Characteristics and typical fields of application

Strip alloyed flux cored wire with rutile slag characteristics mainly for flat and horizontal welding position. Easy handling and high deposition rate of Thermanit TG 307 leads to high productivity with excellent welding behavior, almost spatter and weld oxidation- free welding, finely rippled weld shape with good sidewall wetting and secure penetration.

Properties of the weld metal: work hardenable, very good resistance to cavitation, crack-resistant, thermal shock resistant, resistant to scaling up to 850 °C (1562 °F), insensitive to sigma phase embrittlement above 500 °C (932 °F), cryogenic to -100 °C (-148 °F).

Consultation of the manufacturer is recommended for service temperatures above 650 °C (1202 °F).

Base materials

High strength, unalloyed and alloyed structural steels. Quenched and tempered and armor steels in unity or mixed structures. Unalloyed as well as alloyed boiler or structural steels with high alloyed Cr and Cr-Ni steels. Heat resistant steels up to 850 °C (1562 °F). Austenitic high manganese steels among themselves and with other steels. Cryogenic sheets and pipe steels in joint with cryogenic austenitic materials.

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

	C	Si	Mn	Cr	Ni	Gas
wt-%	0.1	0.7	6.5	18.5	8.8	M21

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	-100 °C
aw	M21	400	450	600	35	60	32

Hardenes approx. 175-225 HB – approx. 400 HB (work hardened)

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21, C1 Consumption: 15 – 18 l/min	ø (mm) 1.2	Spool B300	Amps A 140 – 280	Voltage V 23 – 35
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