FOXcore GUARD 308L-T1

Flux-cored wire, high-alloyed, austenitic stainless, low Cr (VI) emission

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22 / SFA-5.22
T 19 9 L P M21 1	TS 308L-F M21 1	E308LT1-4

Characteristics and typical fields of application

Rutile flux-cored wire of T 19 9 L P / E308LT1 type specially developed to reduce the emission of Cr(VI) significantly. Designed for welding of 1.4307 / 304L type stainless steels with good corrosion resistance under moderately severe conditions, e.g. in oxidizing acids and cold or dilute reducing acids. With FOXcore GUARD 308L-T1, the total amount of Cr(VI) in the welding fume has been substantially reduced to assist in meeting exposure limits, approximately 90% lower than for conventional flux-cored wires. The airborne Cr(VI) has been reduced without compromised weldability. FOXcore GUARD 308L-T1 is designed for position welding and can be used in all positions without changing the parameter settings. Very good slag detachability and almost no spatter formation. The wide arc ensures even penetration and a good side-wall fusion to prevent lack of fusion. Suitable for service temperatures from –196ºC to 350ºC.
Please note that welder and operators should always be protected by fume extraction where possible and preferably also wear welding helmets with breathing apparatus (fresh air supply).

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNiN18-9,
1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
UNS S30400, S30403, S30453, S32100, S34700
AISI 304, 304L, 304LN, 302, 321, 347

Typical analysis

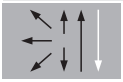
	C	Si	Mn	Cr	Ni	FN
wt.-%	0.03	0.8	1.4	19	12.5	3 – 12

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J		Hardness
	MPa	MPa	%	20°C	–196°C	
u	370 (≥ 320)	545 (≥ 520)	40 (≥ 30)	75	45 (≥ 32)	220

u untreated, as-welded – shielding gas M21 (Ar + 18% CO_2)

Operating data



Polarity	DC +	Dimension mm
Shielding gas (EN ISO 14175)	M21	1.2

Welding with standard GMAW power source with DC+ polarity. No pulsing needed. Backhand (drag) technique preferred with a work angle of approximately 80º. Ar + 15 – 25% CO_2 as shielding gas offers the best weldability and lowest fume emission rate. Suitable gas flow rate is 16 – 25 l/min. The heat input should not exceed 2.0 kJ/mm, the interpass temperature be limited to max. 150ºC and the wire stick-out 15 – 20 mm.

Approvals

CE