Thermanit H Si

Solid wire, high-alloyed, stainless

Classifications			
EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	Mat. No.
G 19 9 Nb Si	SS347Si	ER347Si	1.4551

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °F).
Corrosion-resistant similar to matching stabilized austenitic CrNi steels / cast steel grades.
For joining and surfacing application with matching and similar – stabilized and non-stabilized – austenitic CrNi(N) steels and cast steel grades.

Base materials

TÜV-certified parent metal
1.4550 – X6CrNiNb18-10 and the parent metals also covered by VdTÜV-Merkblatt 1000;
AISI 347, 321, 302, 304, 304L, 304LN; ASTM A296 Gr. CF 8C; A157 Gr. C9; A320 Gr. B8C oder D

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Ni	Nb
wt-%	0.06	0.8	1.5	19.5	9.5	≥ 12xC

Structure: Austenite with part ferrite

Mechanical properties of all-weld metal

Heat-treatment	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
aw	400	430	570	30	65

Operating data

Polarity:	Shielding gas:	ø (mm)	Spool:
DC (+)	(EN ISO 14175) M12, M13	0.8	BS300
		1.0	B300
		1.2	B300

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching and similar steels / cast steel grades	None	Mostly none. Otherwise solution annealing at 1020 °C (1868 °F)

Approvals

TÜV (00604), DB (43.132.06), CE