

Thermanit 20/25 Cu

Solid wire, high-alloyed, stainless

Classifications			
EN ISO 14343-A EN ISO 143	343-B AWS A5.9	Mat. No.	
G 20 25 5 Cu L SS385	ER385	1.4519	

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 350 °C (662 °F). Good corrosion resistance similar to matching steels / cast steel grades, above all in reducing environment. For joining and surfacing work on matching austenitic CrNiMoCu steels/cast steel grades. For joining these steels with unalloyed / low-alloy steels/cast steel grades.

Base materials

TÜV-certified parent metal

1.4505 - X4NiCrMoCuNb20-18-2

1.4539 - X1NiCrMoCu25-20-5 mit 1.4439 - X2CrNiMoN17-13-5

1.4465 – X1CrNiMoCuN25-25-2

1.4537 – X1CrNiMoCuN25-25-5 and others, as well as ferritic steels up to S355J;

matching Cr-Ni steels with high Mo content; UNS N08904, S31726

Typical analysis of solid wire (wt.-%)

	С	Si	Mn	Cr	Мо	Ni	Cu
wt-%	<0.025	0.20	2.5	20.5	4.8	25.0	1.5

Structure: Austenite

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	350	370	550	35	55

Operating data

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

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar steels / cast steel grades	None	None. If necessary solution annealing at 1120 °C (2048 °F)
Combinations with unalloyed/low-alloy steels / cast steel grades	According to unalloyed / low alloy parent metal mostly not necessary	None
Approvals		

TÜV (04302), CE