

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 18 8 Mn	ER307 (mod.)

Characteristics and typical fields of application

Solid wire G 18 8 Mn / ER307 (mod.) for joining and surfacing applications with heat resistant Cr-steels and heat resistant austenitic steels. Well-suited for dissimilar austenitic-ferritic joints and tough buffer and intermediate layers prior to hardfacing.

Base materials

Unalloyed and alloyed structural, quenched and tempered, and armour steels; unalloyed and alloyed boiler or structural steels with high alloyed Cr and CrNi steels; heat resistant steels up to 850 °C; austenitic high manganese steel with matching and other steels.

Typical analysis

	C	Si	Mn	Cr	Ni
wt.-%	0.08	0.8	7.0	19	9.0


Structure: Austenite with small amount of ferrite

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	
	MPa	MPa	%	20°C	-110°C
u	430 (≥ 350)	640 (≥ 500)	36 (≥ 25)	100	≥ 32

u untreated, as-welded – shielding gas Ar + 2.5% CO₂

Operating data

	Polarity	DC +	Dimension mm
	Shielding gas (EN ISO 14175)	M12, M13, M21	0.8
			1.0
			1.2
			1.6

Approvals

TÜV (19790), DB (43.132.86), CE