

AX-307 AX-4370

Material no.: 1.4370

Standards

EN ISO 14343-A:	W 18 8 Mn / G 18 8 Mn
EN ISO 14343-B:	SSZ307
AWS A5.9:	ER307 mod.

Properties

Welding rod/solid wire for joints between different alloyed and difficult-to-weld steels and 14% Mn steels. Tough intermediate layers for hard surfacing. Wear and corrosion resistant coatings on rail and switch parts, valve seats and cavitation protection armor on hydroelectric machines.

Resistant to work hardening, very good cavitation resistance, crack-proof, resistant to thermal shock, resistant to scaling up to 850°C, insensitive to sigma-phase embrittlement above 500°C. Cryogenic down to -110°C. Heat treatment is possible without problems. For operating temperatures above 650°C, consultation with the manufacturer is recommended. Excellent sliding and conveying properties. Very good welding and flow properties.

The microstructure forms fully austenitic without delta ferrite.

Important base materials / Important applications

High-strength, unalloyed and alloyed structural and quenched and tempered steels with and among each other; Unalloyed as well as alloyed steels with high-alloy Cr and Cr-Ni steels; Austenitic manganese hard steels with each other and with other steels; Cryogenic sheet and tube steels in combination with cryogenic austenitic materials.

Typical composition of welding rod / solid wire in %

C	Si	Mn	Cr	Ni
0.06	0.8	6,4	18,5	8,1

Mechanical properties of all-weld metal (typical values)

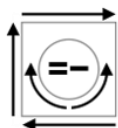
Yield strength $R_{p0,2}$	[MPa]	430
Tensile strength R_m	[MPa]	640
Elongation A ($L_0 = 5d_0$)	[%]	35
Impact work KV	[J]	100 at +20°C

Shielding gas: 100% Argon, PWHT: untreated

Operating data

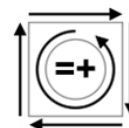
TIG:

Shielding gas: I1 (100%Argon)
acc. to ISO 14175



GMAW:

M12 (e.g. Ar+2.5%CO₂)
M13 (e.g. Ar+max.1.0%O₂)



Approvals

(Please ask for current scope)

Packaging and available sizes

Spools	Ø mm	0.8	1.0	1.2	1.6		
Rods	Ø mm x 1000mm	1.6	2.0	2.4	3.2		

Other dimensions on request.