

ST-80B8

AWS A 5.28: ER80S-B8

EN ISO 21952-A: W CrMo9



❖ Specifications

AWS A 5.28: ER80S-B8
EN ISO 21952-A: W CrMo9

❖ Alloy type

9Cr-1Mo content to be used for the welding of creep resistant steel.

❖ Applications

Low alloy copper-coated tig rod with 9% Cr and 1% Mo content to be used for the welding of creep resistant steel. It will find applications in power plants, chemical or petro-chemical industry and in the ammonia synthesis process. It is also used for heat exchangers, boilers, piping and pressure vessels for temperature service up to 600°C. Its corrosion resistance is higher than 5Cr-0.5Mo steels requirements.

❖ Materials to be welded

ASTM		EN	
A 387 Gr 9	A 336 Gr F9	(DIN X12CrMo 9-1)	(BS 3604 Gr CFS 629-470)
A 335 Gr 9	A 217 Gr C12	(DIN X7CrMo 9-1)	(BS 3604 Gr HFS 629-470)
A 234 Gr WP9		(DIN GS-12CrMo 10-1)	(BS 3604 Gr HFS 629-590)
A 199 Gr T9		(BS 3100 Gr B6)	(BS 3604 Gr CFS 629-590)
A 213 Gr T9			(BS 1504 Gr 629)
A 182 Gr F9			

❖ Welding guidelines

Preheat and interpass temperature 200 ÷ 250°C. PWHT at 745°C for an hour.

❖ Technical information

Gas: Argon 100% (EN ISO 14175)
Welding position: all positions



❖ Welding parameters

Current	DC - Straight polarity					
Diameter (mm)	1.2	1.6	2.0	2.4	3.2	4.0
Length (mm)	1000	1000	1000	1000	1000	1000
Carton	5/25KG	5/25kg	5/25kg	5/25kg	5/25kg	5/25kg

* tolerances according to EN ISO 544 specification.



❖ Typical chemical composition of wire

C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
0.07	0.50	0.40	0.008	0.004	9.00	-	1.00	0.10

❖ Typical mechanical properties

GAS		Yield strength	Tensile strength	Elongation on % 5d
		Rs	Rm	A 5d
		(Mpa)	(Mpa)	%
I1	After PWHT	660	750	19

Impact energy (Charpy V)				
+20°C (Joule)	0°C (Joule)	-20°C (Joule)	-40°C (Joule)	-60°C (Joule)
150	-	-	-	-