



# MIG F609

Old reference: MIG 80SB8

## Classification

AWS A5.28 : ER80S-B8

ISO 21952-A : G CrMo9

## Description & Applications

Copper coated solid wire for gas (Ar + O<sub>2</sub>) metal arc welding of creep resistant steels alloyed Chromium and Molybdenum (9% Cr - 1% Mo) applied at service temperature up to 600°C. Its corrosion resistance is higher than 5% Cr - 0.5% Mo steels requirements.

**Main applications:** High temperature exchangers, piping, steam boilers, pressure vessels, overheaters...

**Base material :**

**Creep resisting steels :**

EN	ASTM
X12CrMo 9-1	A 182 gr F9
X7CrMo 9-1	A 199 gr T9
	A 213 gr T9
	A 217 gr C12
	A 234 gr WP9
	A 335 gr 9
	A 387 gr 9

## Typical Chemical Composition ( % )

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	V	P	S	O/T
Min	0.06	0.30	0.40	8.5		0.80						
Max	0.10	0.50	0.70	10.0	0.50	1.20	0.3	0.01	0.15	0.025	0.025	0.50
Type	0.07	0.40	0.50	9.0	0.25	1.0	0.12	0.005	0.02	0.01	0.01	<0.50

## All Weld Metal Mechanical Properties\*

	R <sub>e</sub> ( MPa )	R <sub>m</sub> ( MPa )	A <sub>5</sub> ( % )	KV ( J )
Min	470	590	18	+20°C
Max				>34
Type	500	630	23	+20°C
				60

\* After PWHT at 745°C/1h

## Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current ( A )	Voltage ( V )	
GMAW = +	1.0	80 - 260	17 - 32	ISO 14175: M22 (Ar/O <sub>2</sub> ) 12-15 l/min
	1.2	100 - 360	18 - 34	
	1.6	130 - 450	19 - 38	

Preheating and interpasses temperature: 200-260°C

FT En-MF10-191113

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