

## Classifications

EN ISO 21952-A	EN ISO 14341	AWS A5.28 / SFA-5.28
G ZMn4MoSi	G4Mo	ER80S-D2 / ER90S-D2

## Characteristics and typical fields of application

Low-alloyed solid wire electrode for welding of low-alloyed and higher strength steel grades using CO<sub>2</sub> or Ar based mixed gases. Applications include boiler, tank, pipeline and reactor construction.

## Base materials

P235GH – P460M, 16 Mo 3; S460N; S460MC;  
ASTMA 36 - K02600  
ASTMA 161-94 Gr. T1; ASTMA 182M  
ASTMA 204M; ASTMA 217; ASTMA 250M  
ASTMA 285 - Gr. C - K02801  
ASTMA 335 Gr. P1  
ASTMA 515 Gr. 70 - K03101  
ASTMA 516 Gr. 70 - K02700

## Typical analysis

	C	Si	Mn	Mo
wt.-%	0.09	0.65	1.8	0.52

## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact energy ISO-V KV J
	MPa	MPa	%	-30°C
u1	(≥ 540)	(≥ 620)	(≥ 17)	(≥ 47)
u2	(≥ 470)	(≥ 550)	(≥ 17)	(≥ 27)
s1	(≥ 510)	(≥ 600)	(≥ 19)	(≥ 27)

u1 untreated, as welded - shielding gas M21  
u2 untreated, as welded - shielding gas CO<sub>2</sub>  
s1 stress relieved 610°C / 5h - shielding gas M21

## Operating data

	<b>Polarity</b>	DC+	<b>Dimension mm</b>
	<b>Shielding gas (EN ISO 14175)</b>	C1	0.9
		M13 M22	1.14

Recommended preheat temperature max. 135°C (275° F), interpass temperature max. 165°C (325° F)  
Shielding gas: Ar/1-5% O<sub>2</sub>; Ar/CO<sub>2</sub>/O<sub>2</sub> mixtures; 100% CO<sub>2</sub>

## Approvals

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