

## Classification

<b>AWS A5.18</b>	<b>EN ISO 636-A</b>
ER70S-6	W 42 5 3Si1

## Characteristics and typical fields of application

A copper coated, manganese-silicon alloyed GTAW wire of all general engineering and structural steels fabrication with minimum yield strength of max 400 MPa. High levels of silicon and manganese for use on slightly contaminated base materials. Contains more deoxidizers than ER70S-3. The additional deoxidizers also provide better wetting, giving a flatter bead shape and the capability of faster travel speeds. The welding rod is suitable for joint welding in the construction of Small diameter pipe and tubing, process piping, boilers, containers and offshore structures. Complying the corrosion testing requirements as per NACE MR 0175 standard TM 01-77-96 (SSC) and 02-84-96 (HIC).

## Base Materials

Steels up to a yield strength of 420 MPa (60 ksi)  
 S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, S275NLS420NL, S275ML-S420ML, P235GH-P355GH, P275NL1-P355NL1, P275NL2-P355NL2, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240  
 ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1, LF2; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. A, C, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 711 Gr. 1013; A 841 Gr. A, B, C; API 5 L Gr. B, X42, X52, X56, X60

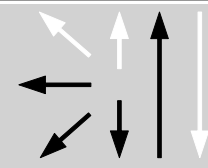
## Typical analysis of solid wire (wt.-%)

C	Si	Mn	P	S
0.07	0.85	1.48	≤ 0.020	≤ 0.015

## Mechanical properties of all-weld metal

Heat treatment	Yield strength R <sub>e</sub> N/mm <sup>2</sup>	Tensile strength R <sub>m</sub> N/mm <sup>2</sup>	Elongation (L <sub>0</sub> =4d <sub>0</sub> )	Impact work ISO-V KV J	Impact work ISO-V KV J
	MPa	MPa	%	-40 °C	-50 °C
As Welded	430	540	40	100	90
620°C/2 h	400	510	28	110	100

## Operating data

	<b>Polarity</b> DCEN	Shielding Gas : Argon
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## Approval

ABS , CE

Size mm	Kg / Plastic tube	Amperage
1.60	5.0	50 – 110
2.00	5.0	60 – 130
2.40	5.0	80 – 150
3.20	5.0	120 – 210