

## Classifications

<b>EN ISO 14341-A</b>	<b>AWS A5.18</b>
G 42 4 M21 3Si1	ER70S-6
G 42 4 C1 3Si1	

## Characteristics and typical fields of application

Non coppered solid wire designed for excellent feeding properties at high wire feed rates. The non coppered welding wires of the EMK NC series are characterised by very good feeding properties at high wire feeding rates, by a very stable arc performance and significant lower oxide / silicate forming on the weld surface. This makes them especially suited for fully mechanised processes where the wire comes in BASEdrum or the environmental friendly ECOdrum bulk package.

## Base materials

Steels up to a yield strength of 420 MPa (60 ksi)  
 S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, P275NL1-P355NL1, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240, ship building steels: A, B, D, E, A 32-E 36  
 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; 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. C; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60

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

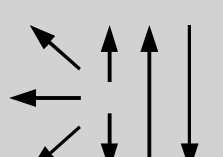
	C	Si	Mn
wt.-%	0.08	0.9	1.45

## Mechanical properties of all-weld metal

Condition	Yield strength R <sub>e</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-40 °C
u	<b>440</b> (≥ 420)	<b>560</b> (500 – 640)	<b>28</b>	<b>160</b>	<b>80</b> (≥ 47)

u untreated, as welded M21, CO<sub>2</sub>

## Operating data

	<b>Polarity:</b> DC (+)	<b>Shielding gases:</b> C1, M2, M3	<b>ø (mm)</b>
			1.0
			1.2
			1.6

## Approvals

TÜV (19133), DB (42.132.66), CE