

## Classifications

<b>EN ISO 14341-A</b>	<b>AWS A5.18 / SFA-5.18</b>
G 46 4 M21 4Si1	ER70S-6
G 46 4 C1 4Si1	

## Characteristics and typical fields of application

Solid wire electrode with engineered surface, designed for reliable welding performance within a wide parameter range. The non coppered welding wires of the BÖHLER EMK NC series are characterised by very good feeding properties at high wire feeding rates, a very stable arc performance and significant low oxide / silicate forming on the weld surface. This makes them especially suited for fully mechanised processes with wire from BASEdrum or the environmental friendly ECOdrum bulk package.

## Base materials

Steels with a yield strength  $\geq 460$  MPa (67 ksi)  
S235JR-S355JR, S235JO-S355JO, S450JO, S235J2-S355J2, S275N-S460N, S275M-S460M, P235GH-P355GH, P275NL1-P460NL1, P215NL, P265NL, P355N, P285NH-P460NH, P195TR1 - P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L450QB, L245MB-L450MB, 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, E; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60, X65

## Typical analysis

	C	Si	Mn
wt.-%	0.1	1.0	1.7

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

Condition	Yield strength $R_e$	Tensile strength $R_m$	Elongation A ( $L_0=5d_0$ )	Impact energy ISO-V KV J	
	MPa	MPa	%	20°C	-40°C
u	480 ( $\geq 460$ )	620 (530 – 680)	26 ( $\geq 20$ )	150 ( $\geq 47$ )	80 ( $\geq 47$ )

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

## Operating data

	<b>Polarity</b>	DC +	<b>Dimension mm</b>
	<b>Shielding gas (EN ISO 14175)</b>	C1	0.8
		M21	1.0
		M33	1.2
			1.6

## Approvals

TÜV (19648), DB (42.132.87), CE