

## Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1 / SFA-5.1	AWS A5.1M
E 42 5 B 3 2 H5	E4918-1 AU H5	E7018-1	E4918-1

## Characteristics and typical fields of application

Basic covered electrode with good welding characteristics including out of position work; weld metal recovery 110 %, low H<sub>2</sub>-content in the weld metal <5 ml/100 g; very pure cryogenic weld metal at temperatures as low as -50°C, CTOD tested up to -10°C  
Suitable for use in structural steel work, boiler making, tank construction, ship and bridge building and vehicle manufacture; particularly suitable for welding fine grained structural steels. Suitable for welding in the offshore industry.

## Base materials

S235JRG2 - S355J2, E295, E335, C 35; boiler steels P235GH, P265GH, P295GH, P355GH; fine grained structural steels up to S420N; shipbuilding steels A, B, D, E; offshore steels; pipe steels P265, P295, L290NB - L415NB, L290MB - L415MB; X 42 - X 60; cast steel E200, GE240, GE260;  
ASTM A27 and A36 Gr. all, A214, A242 Gr. 1-5, A266 Gr. 1, 2, 4, A283 Gr. A, B, C, D, A285 Gr. A, B, C, A299 Gr. A, B, A328, A366, A515 Gr. 60, 65, 70, A516 Gr. 55, A570 Gr. 30, 33, 36, 40, 45, A572 Gr. 42, 50, A606 Gr. all, A607 Gr. 45, A656 Gr. 50, 60, A668 Gr. A, B, A907 Gr. 30, 33, 36, 40, A841, A851 Gr. 1, 2, A935 Gr. 45, A936 Gr. 50

## Typical analysis

	C	Si	Mn
wt.-%	0.07	0.35	1.2


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

Condition	Yield strength R <sub>0.2</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	%	20°C	-50°C
u	430 (≥ 420)	540 (500 - 640)	22 (≥ 20)	180	≥ 47
s	400	500	26	130	≥ 47

u untreated, as welded

s stress released at 580°C / 12h

## Operating data

	<b>Polarity</b>	DC +; AC root pass: DC - for Ø 2,5 / 3,2 mm	<b>Dimension mm</b>	<b>Current A</b>
	<b>Electrode identification</b>	Phoenix 120 K/E 42 5 B/ E 7018-1	2.5 × 250	65 - 110
			2.5 × 350	65 - 110
	<b>Redrying</b>	250-350°C/2h	3.2 × 350	100 - 145
			3.2 × 450	100 - 145
			4.0 × 350	135 - 200
			4.0 × 450	135 - 200
5.0 × 450			180 - 280	
		6.0 × 450	240 - 375	

## Approvals

TÜV (00348), DB (10.014.83), ABS, BV, DNV, LR,