Phoenix Spezial D

Stick electrode, mild steel, basic coated

Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1 / SFA-5.1	AWS A5.1M
E 42 3 B 1 2 H10	E4916 AU	E7016	E4916

Characteristics and typical fields of application

Basic double coated electrode with excellent weldability in all positions except vertical-down.
Especially suited for out-of-position welding thanks to the well controlled arc. Excellent root penetration. Good suitability for welding on AC. Minimum spatter loss, very easy slag removal with uniform beads. well-suited for small transformers. Low hydrogen content in the weld deposit (HD < 10 ml/100 g deposit).

Base materials

Steels up to a yield strength of 420 MPa (60 ksi)
S235JR-S355JR, S235J0-S355J0, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, 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 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. A, C, D; A 662 Gr. A, B, C; A 678 Gr. A, B; A 711 Gr. 1013; API 5 L Gr. B, X42, X52, X56, X60

Typical analysis

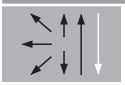
	C	Si	Mn
wt.-%	0.06	0.65	1.05

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

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J	
	MPa	MPa	%	20°C	-30°C
u	440 (≥ 420)	550 (500 - 640)	28 (≥ 20)	170	50 (≥ 47)
s	400	520	28	170	50

u untreated, as welded
s stress relieved 580 °C/2h / furnace down to 300 °C / air

Operating data



Polarity	DC+ / AC
Electrode identification	7016 E 42 3 B
Redrying	300 °C/2 h

Dimension mm	Current A
2.5 × 350	60 – 90
3.2 × 350	95 – 150
3.2 × 450	95 – 150
4.0 × 450	140 - 190
5.0 × 450	190 – 250

Approvals

TÜV (10572), DB (10.138.12), LR, DNV, CE

All information provided is based upon careful investigation and intensive research.
However, we do not assume any liability for correctness and information is subject to change without notice.