

High strength cellulosic electrode

Classification

AWS A5.5-96 : E7010-A1
EN 499-94 : E 42 2 Mo C 25

General description

Cellulosic coated electrode for vertical down pipe welding
Suitable for pipe strengths in range X52-X56, as well as for 0.5%Mo pipe steels
Can be used for root, fill and capping passes
Low susceptibility to wagon tracks, windows and pinholes

Welding positions



ISO/ASME PG/5Gdown

Current type

DC electr. +

Approvals

TÜV

+

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Mo
0.11	0.50	0.25	0.50

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) -20°C
Required: AWS A5.5-96		min. 390	min. 480	min. 22	not required
EN 499-94		min. 420	540-640	min. 20	min. 47
Typical values	SR:1h/620°C	450	570	26	80

Packaging, available sizes and identification

	Diameter (mm)	3.2	4.0	5.0
	Length (mm)	350	350	350
Unit: Metal can	Pieces / unit (nominal)	320	210	145
	Net weight/unit (kg)	8.3	8.5	9.0

Identification

Imprint: E7010-A1 SA85

Tip colour: none

Shield Arc® 85: rev. EN 15

Materials to be welded

Steel	Code	Type
Pipe material	EN 10208-2	L 360
	EN 10216-1 / 10217-1	P 355
	API 5LX	X46, X52
	Gaz de France	X46, X52

Calculation Data

Sizes Diam. x length (mm)	Current range A)	Current type	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate - H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
3.2 x 350	80-140	DC+				25.6		
4.0 x 350	100-200	DC+				40.3		
5.0 x 350	140-210	DC+				61.4		

* stub end = 35 mm

Welding parameters, optimum fill passes

Welding position:	PG/5G down
Diameter (mm)	Current (A)
3.2	120
4.0	170
5.0	180

Application Advice

Preheating pipe material L360 required (acc. EN 1011-1).

Pipeclamps to be removed after finishing root pass, start welding "hot pass" immediately (within 5 min.) after root pass.

Use electrode directly from metal cans.