

## High strength cellulosic electrode

### Classification

AWS A5.5-96 : E 9010-G  
 EN 499-94 : E 50 4 1NiMo C 25

### General description

Cellulosic electrode, 0.5% Mo and Ni-alloyed, for vertical down welding in pipes  
 Suitable for pipe material API 5LX-70 and X-80, EN 10208-2, or L480 and L550  
 Applicable for root, filling- and capping pass  
 Not sensitive for wagon tracks, windows and pinholes

### Welding positions



ISO/ASME PG/5Gdown

### Current type

DC electr. +  
 DC electr. - (root)

### Approvals

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

C	Mn	Si	Mo	Ni
0.13	0.60	0.15	0.6	0.7

### Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
					-40°C	-46°C
Required: AWS A5.5-96		min. 530	min. 620	min. 17	not required	
EN 499-94		min. 550	560-720	min. 18	min. 47	
Typical values	AW	550	640	22	50	45

### Packaging, available sizes and identification

	Diameter (mm)	3.2	4.0	5.0
	Length (mm)	350	350	450
Unit: Metal can	Pieces / unit (nominal)	340	210	145
	Net weight/unit (kg)	8.7	8.5	9.0

Identification Imprint: 9010-G

Tip colour: none

Shield Arc® 90: rev. EN 15

## Materials to be welded

Steel	Code	Type
Pipe material	EN 10208-2 API 5LX	L 480 , L 550 X70, X80

## 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	75-130	DC+				26.3		
4.0 x 350	80-185	DC+				40.8		
5.0 x 450	140-225	DC+				63.6		

\* 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 required (acc. EN 1011-1)

Rootlayer preferable to weld with lower yield electrodes (Fleetweld® 5P/5P+ or Shield Arc 70+.)

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.