

## High strength cellulosic electrode

### Classification

AWS A5.5-96 : E8010-G  
EN 499-94 : E 46 4 1Ni C 25

### General description

Cellulosic coated electrode for vertical down pipe welding  
Suitable for pipe with strengths in the range of X56 - X70  
Can be used for root, fill and capping passes  
Low susceptibility to wagon tracks, windows and pinholes  
Good impact properties  
Can be used for silicon-killed steels

### Welding positions



ISO/ASME PG/5Gdown

### Current type

DC electr. +

### Approvals

TÜV

+

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

C	Mn	Si	Ni	Cr	V	P	S
0.12	0.90	0.20	0.85	0.10	0.03	0.012	0.013

### 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)	
					-20°C	-40°C
Required: AWS A5.5-96		min. 460	min. 550	min. 19	not required	
EN 499-94		min. 460	530-680	min. 20	min. 47	
Typical values	AW	510	570	24	75	

### Packaging, available sizes and identification

	Diameter (mm)	3.2	4.0	5.0
	Length (mm)	350	350	350
Unit: Metal can	Pieces / unit (nominal)	325	205	130
	Net weight/unit (kg)	8.4	8.1	8.1

### Identification

Imprint: 8010-G SA70+

Tip colour: none

Shield Arc® 70+: rev. EN 15

## Materials to be welded

Steel	Code	Type
Pipe material	EN 10208-2	L 360, L 415, L 445, L 480
	EN 10216-1 / 10217-1	P 355
	API 5LX	X 56, X60, X65, X70
	Gaz de France	X52, X63

## 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+				25.8		
4.0 x 350	90 - 185	DC+				39.5		
5.0 x 350	140 - 225	DC+				62.3		

\* stub end = 35 mm

## Welding parameters, optimum fill passes

Welding position:	PG/5G down
Diameter (mm)	Current (A)
3.2	110
4.0	150
5.0	165

## Application Advice

Preheating pipe material L360 t/m L480 (X56 t/m X70) 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.

Use Fleetweld® 5P for lower hardness in the root pass