

High recovery basic electrode

Classification

AWS A5.1 : E7028 H4R
ISO 2560-A : E 42 4 B 73 H5

General description

Basic low hydrogen electrode ($H_{bM} < 5 \text{ ml/100g}$)
245% recovery and easy slag release
Fillet welds and horizontal V- and X-welds
Good impact values at -40°C
Excellent X-ray soundness
Deposition rate is comparable with submerged arc welding

Welding positions



ISO/ASME PA/1G PB/2F*

Current type

AC / DC + / -

Approvals

ABS	BV	DNV	GL	LR	RINA	RMRS	TÜV
4Y400H5	3.3YHH	4Y40H5	4Y40H5	4Y40H5	4YH5	3-3YH5	+

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

C	Mn	Si	H _{bM}
0.08	1.3	0.45	4 ml/100 g

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
					-18°C	-40°C
Required: AWS A5.1		min. 400	min. 483	min. 22	min. 27	
ISO 2560-A		min. 420	500-640	min. 20		min. 47
Typical values	AW	460	550	29		80

Packaging and available sizes

	Diameter (mm)		
	4.0	5.0	6.0
	Length (mm)		
	450	450	450
Unit: box	Pieces / unit		
	42	26	19
	Net weight/unit (kg)		
	5.9	5.8	5.8

Identification

Imprint: 7028 / CONARC V250

Tip Color: red

Conarc® V250: rev. EN 21

Materials to be welded

Steel grades/Code	Type
General structural steel	
EN 10025	S185, S235, S275, S355
Ship plates	
ASTM A131	Grade A, B, D, AH32 to EH40
Cast steel	
EN 10213-2	GP240R
Pipe material	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240, L290, L360, L415, L445
API 5LX	X42, X46, X52
EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
Boiler & pressure vessel steel	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	
EN 10113-2	S275, S275, S355, S420
EN 10113-3	S275, S355, S420

Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. (s)*	Energy E(kJ)	Dep.rate - H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
4.0 x 450	190 - 240	AC	70	621	4.8	141	10	1.40
5.0 x 450	260 - 360	AC	73	1017	7.1	217	7	1.39
6.0 x 450	300 - 470	AC	72	1324	10.1	300	4	1.37

* stub end 35 mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G	PB/2F
4.0	230A	200A
5.0	300A	260A
6.0	390A	

Remarks/ Application advice

Electrodes after removal from cardboard boxes redry 2-4h 350 ± 25°C
Transformers with OCV > 70 V recommended