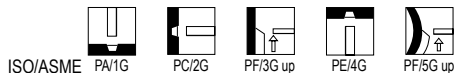


CLASSIFICATION

AWS A5.1 : E7016-1 H4R
ISO 2560-A : E 42 4 B 12 H5

GENERAL DESCRIPTION

Basic extremely low hydrogen electrode
Good impact values at -40 °C
Good CTOD at -10°C, meets offshore requirements
Excellent root pass electrode (diam. 2.5 and 3.2 mm)
Also available in vacuum sealed Sahara ReadyPack®(SRP): HDM< 3 ml/100g)

WELDING POSITIONS**CURRENT TYPE**

AC / DC +/-

APPROVALS

ABS	BV	DNV	LR	GL	TÜV
3H,3Y	3,3YHH	3YH5	3,3YH5	3YH10	+

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	P	S	H _{DM}
0.06	1.4	0.5	0.015	0.010	2 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

		Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)		
Condition					-20°C	-40°C	-46°C
Required: AWS A5.1 ISO 2560-A Typical values		min. 400	min. 483	min. 22			min. 27
		min. 420	500-640	min. 20		min. 47	
	AW	520	575	28	115	80	60

PACKAGING AND AVAILABLE SIZES

		Diameter (mm)	2.5	3.2	3.2	4.0	4.0	5.0
		Length (mm)	350	350	450	350	450	450
Unit: carton box	Pieces / unit	136	150	151	100	96	55	
	Net weight/unit (kg)	2.7	4.7	6.0	4.6	6.0	6.0	
Unit: SRP	Pieces / unit	70	56	56	30	30	23	
	Net weight/unit (kg)	1.4	1.8	2.3	1.4	1.8	2.6	

Identification Imprint: 7016-1 / CONARC 51 Tip Color: gold

Conarc® 51: rev. EN 24

Conarc® 51

MATERIALS TO BE WELDED

Steel grades/Code	Type
General structural steels	
EN 10025	S185, S235, S275, S355
Ship plates	
ASTM A 131	Grade A, B, D, AH32 to EH40
Cast steels	
EN 10213-2	G P 240R
Pipe material	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240, L290, L360, L415, L445
API 5LX	X42, X46, X52, X60
EN 10216-1	P235T1, P235T2, P275T1
EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steels	
EN 10025 part 3	S275, S355, S420
EN 10025 part 4	S275, S355, S420

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 weld- metal B	kg electrodes/ kg weldmetal 1/N
2.5x350	40-80	DC+	53	123	0.8	19.6	86	1.68
3.2x350	70-120	DC+	62	178	1.0	30.8	57	1.74
3.2x450	70-120							
4.0x350	100-160	DC+	71	306	1.4	48.0	37	1.78
4.0x450	100-160							
5.0x450	180-240	DC+	104	702	2.6	103.0	13	1.36

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions				
	PA/1G	PC/2G	PF/3Gup	PE/4G	PF/5Gup
2.5	75A	70A	75A	70A	75A
3.2	100A	110A	100A	100A	100A
4.0	150A	140A	130A	125A	125A
5.0	220A	220A	180A		

REMARKS / APPLICATION ADVICE

Electrodes after removal from cardboard boxes redry 2-4h 350 ±25°C