Conarc® V180

EMR SAHARA®

CLASSIFICATION

AWS A5.1	E7028 H4R	**A-Nr**	1
ISO 2560-A	E 42 4 B 7 3 H5	**F-Nr**	1
		9606 FM	1

GENERAL DESCRIPTION

Basic extremely low hydrogen electrode (HDM< 3 ml/100g)
175% recovery and easy slag release
Fillet welds and horizontal V- and X-welds
Reliable impact toughness down to -40°C, good CTOD at -10°C
Excellent X-ray quality
Also available in vacuum sealed Sahara ReadyPack® (SRP)

WELDING POSITIONS (ISO/ASME)

PA/1G PB/2F PC/2G

CURRENT TYPE

AC/DC + / -

APPROVALS

ABS	BV	DNV	LR	GL	RINA	RMRS
3YH5	3,3YHH	3YH5	3,3YH5	3YH10	3YH5	3-3YH5

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

C	Mn	Si	P	S	HDM
0.08	1.2	0.3	0.015	0.010	2 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	Yield strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) -18°C/-20°C	Impact ISO-V(J) -40°C
Required: AWS A5.1		min. 400	min. 490	min. 22	min. 27	
ISO 2560-A		min. 420	500-640	min. 20		min. 47
Typical values	AW	440	510	30	130	80

CTOD value at -10°C > 0.25mm

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	3.2	4.0	5.0	6.3
	Length (mm)	450	450	450	450
Carton + PE foil	**Pieces / unit**	-	60	40	23
	Net weight/unit (kg)	-	6.0	6.1	5.4
SRP	**Pieces / unit**	27	23	19	-
	Net weight/unit (kg)	2.0	2.4	2.8	-

Identification Imprint: 7028 / CONARC V180 Tip Color: white

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EXAMPLES OF 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	GP240R
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 steels	
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 - per electrode at max. current - E(kJ)	Dep. rate - per electrode at max. current - H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
3.2x450	130-160	AC	73	337	2.3	68.9	21	1.47
4.0x450	170-240	AC	70	538	3.6	101.0	14	1.45
5.0x450	275-330	AC	75	780	4.9	149.7	10	1.45
6.3x450	280-425	AC	83	1171	7.0	230.4	6	1.43

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions PA/1G	PB/2F	PC/2G
3.2	160A	140A	140A
4.0	230A	190A	190A
5.0	300A	230A	230A
6.3	390A	280A	

REMARKS / APPLICATION ADVICE

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