

## CLASSIFICATION

AWS A5.1	E7018-1 H4R	A-Nr	1
ISO 2560-A	E 46 4 B 4 2 H5	F-Nr	4
		9606 FM	1

## GENERAL DESCRIPTION

Basic very low hydrogen electrode (HDM<5 ml/100g)

Recovery 130%

Excellent weldability on DC+ in all positions, especially overhead and vertical up

Excellent impact toughness down to -40°C

Excellent X-ray soundness

## WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G

## CURRENT TYPE

DC +

## APPROVALS

DNV

4YH5

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

C	Mn	Si	HDM
0.05	1.3	0.3	4 ml/100 g

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
				-40°C	-46°C
Required: AWS A5.1	min. 400	min. 490	min. 22		min. 27
ISO 2560-A	min. 460	530-680	min. 20	min. 47	
Typical values AW	470	570	27	103	80

## PACKAGING AND AVAILABLE SIZES

Carton + PE foil	Diameter (mm)	2.0	2.5	3.2	4.0	5.0
	Length (mm)	300	350	450	450	450
Pieces / unit	Net weight/unit (kg)	146	110	110	82	58
		1.9	2.5	5.7	6.0	6.3

# Conarc® 48

## EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Code	Type
<b>General structural steels</b>	
EN 10025	S185, S235, S275, S355
<b>Ship plates</b>	
ASTM A 131	Grade A, B, D, AH32 to EH40
<b>Cast steels</b>	
EN 10213-2	GP240R
<b>Pipe material</b>	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240, L290, L360, L415, L445
API 5LX	X42, X46, X52, X60, X65
EN 10216-1	P235T1, P235T2, P275T1
EN 10217-1	P275T2, P355N
<b>Boiler &amp; pressure vessel steels</b>	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
<b>Fine grained steels</b>	
EN 10025 part 3	S275, S355, S420, S460
EN 10025 part 4	S275, S355, S420, S460

## CALCULATION DATA

Sizes		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
Diam. x length (mm)	Current range (A)							
2.0x300	50-80	DC+	53	0.6	14.3	123	1.76	
2.5x350	80-110	DC+	64	0.8	23.1	67	1.55	
3.2x350	95-150	DC+	67	1.3	40.0	40	1.60	
3.2x450	95-150	DC+	-	-	-	-	-	
4.0x350	125-210	DC+	83	1.7	57.6	26	1.50	
4.0x450	125-210	DC+	95	1.8	73.4	21	1.54	
5.0x450	190-270	DC+						

\*Stub end 35mm

## REMARKS / APPLICATION ADVICE

Redry electrodes 2-4h 350 ±25°C after removal from cardboard boxes