

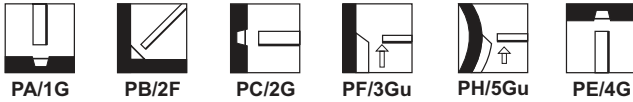
### CLASSIFICATION

AWS A5.1	E7018-1 H4R	A-Nr	1
ISO 2560-A	E 46 4 B 3 2 H5	F-Nr	4
		9606 FM	1

### GENERAL DESCRIPTION

Basic extremely low hydrogen electrode  
 Reliable impact toughness -40°C, good CTOD at -10°C  
 The off-shore electrode when Ni-alloying is not allowed  
 100 - 120% recovery  
 Good pipe welding properties  
 Excellent X-ray soundness  
 Also available in vacuum sealed Sahara ReadyPack® (SRP)

### WELDING POSITIONS (ISO/ASME)



### CURRENT TYPE

AC/DC +/-

### APPROVALS

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

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

C	Mn	Si	P	S	HDM
0.06	1.4	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)		
				-20°C	-50°C	-46°/-50°C
Required: AWS A5.1 ISO 2560-A	min. 400 min. 460	min. 490 530-680	min. 22 min. 20			min. 27
Typical values AW	480	580	28	200	170	100

Suitable for both As Welded and Stress Relieve (PWHT) conditions  
 CTOD value at -10°C > 0.25mm

### PACKAGING AND AVAILABLE SIZES

	Diameter (mm) Length (mm)	2.5	3.0	3.2	3.2	4.0	4.0	5.0
		350	350	350	450	350	450	450
Carton + PE foil	Pieces / unit	135	80	120	120	85	85	55
	Net weight/unit (kg)	2.7	2.4	4.4	5.8	4.7	5.9	6.0
SRP	Pieces / unit	70	-	50	50	28	28	23
	Net weight/unit (kg)	1.4	-	2.0	2.5	1.6	2.0	2.6

Identification Imprint: 7018-1/CONARC 49C Tip Color: grey

Conarc® 49C. rev. C-EN27-12/05/16

# Conarc® 49C

## 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 Diam. x length (mm)	Current range (A)	Current type	Arc time	Energy	Dep. rate	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
			- per electrode at max. current - (S)*	E(kJ)	H(kg/h)			
2.5x350	55-80	DC+	55	99	0.78	19.6	84	1.65
3.0x350	70-110	DC+	53	193	1.2	30.4	58	1.77
3.2x350	80-130	DC+	65	217	1.2	37.9	45	1.69
4.0x350	120-160	DC+	75	348	1.6	54.2	30	1.61
4.0x450	120-160	DC+	100	444	1.7	70.4	21	1.47
5.0x450	180-240	DC+	90	632	2.6	105.6	15	1.60

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions					
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PH/5Gup
2.5	80A	80A	80A	85A	80A	80A
3.0	110A	110A	115A	110A	105A	110A
3.2	140A	120A	145A	120A	120A	120A
4.0	150A	140A	150A	140A	135A	140A
5.0	220A	210A	210A	170A		

## REMARKS / APPLICATION ADVICE

Redry electrodes 2-4h 350 ±25°C after removal from cardboard boxes.  
Best choice : 3.0 x 350mm for rootlayer welding in pipes.