

## CLASSIFICATION

AWS A5.1	E7018-1 H4R	A-Nr	1
ISO 2560-A	E 42 5 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  
 115 - 120% recovery  
 Good pipe welding properties  
 Excellent X-ray soundnessA  
 Iso available in vacuum sealed Sahara ReadyPack® (SRP)

## WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PH/5Gu



PE/4G

## CURRENT TYPE

AC/DC +/-

## APPROVALS

ABS	BV	DNV	LR	GL	RMRS	RINA	TÜV
3H,3Y	3YHH	3YH5	3,3YH5	3YH10	3,3YH5	4YH5	+

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

C	Mn	Si	P	S	HDM
0.05	1.3	0.4	0.015	0.010	3 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)			
				-20°C	-40°C	-46°C	-50°C
Required: AWS A5.1 ISO 2560-A	min. 400	min. 490	min. 22			min. 27	
Typical values	min. 420	500-640	min. 20			min. 47	
AW	480	575	28	200	120	100	80

CTOD value at -10°C &gt; 0.25mm

## PACKAGING AND AVAILABLE SIZES

	Diameter (mm) Length (mm)	2.5	3.2	4.0	5.0
			350	450	450
Carton + PE foil	Pieces / unit Net weight/unit (kg)	110 7.5	120 7.7	85 8.3	55 8.2
SRP	Pieces / unit Net weight/unit (kg)	60 1.4	50 2.5	28 2.0	23 2.5

Identification Imprint: 7018-1 / CONARC ONE

Tip Color: blue

Conarc® ONE: rev. C-EN04-01/02/16

# Conarc® ONE

## 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 - 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
2.5x350		60-100	DC+	60	138	0.83	23.1	72	1.67
3.2x450		90-145	DC+	93	337	1.27	50.8	30	1.54
4.0x450		110-160	DC+	103	464	1.65	71.2	21	1.52
5.0x450		160-250	DC+	177	717	2.24	108.8	14	1.49

\*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	90A	90A	85A	90A	85A	80A
3.2	140A	140A	150A	120A	115A	120A
4.0	175A	175A	170A	150A	145A	145A
5.0	230A	230A	215A	170A		

## REMARKS / APPLICATION ADVICE

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