

## CLASSIFICATION

<b>AWS A5.5</b>	E7018-G-H4R <sup>1)</sup>	<b>A-Nr</b>	10
<b>ISO 2560-A</b>	E 50 6 Mn1Ni B 3 2 H5	<b>F-Nr</b>	4
<sup>1)</sup> meet also AWS A5.5:E8018-G-H4R		<b>9606 FM</b>	1

## GENERAL DESCRIPTION

The basic all position offshore electrode with max. 1% Ni

Excellent mechanical properties (impact down to -60°C)

Good CTOD down to -10°C

Extremely low hydrogen content

110 - 120% recovery

Weldable on AC and DC, also available in vacuum sealed Sahara ReadyPack<sup>®</sup> [SRP]: HDM<3 ml/100g

## WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

## CURRENT TYPE

AC / DC +/-

## APPROVALS

ABS	BV	DNV	LR	GL	RINA	RMRS	TÜV
3Y	UP	5Y46H5	5Y40H5	6Y46H10	4YH5	3-3YH5	+

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

C	Mn	Si	P	S	Ni	HDM
0.05	1.5	0.4	0.010	0.010	0.9	2 ml/100 g

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
				-20°C	-60°C
Required: AWS A5.5	min. 390	min. 480	min. 22	not required	
ISO 2560-A	min. 500	560-720	min. 18		min. 47
Typical values					
AW	550	640	24	150	90
SR:580°C/15h	460	550	24		90

CTOD value at -10°C > 0.25 mm

## PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	Length (mm)	2.5				3.0		3.2		4.0		5.0	
			350	350	350	450	350	450	450	450	350	450	350	450
<b>Carton + PE foil</b>	<b>Pieces / unit</b>		135	-	130	120	85	85	-	-	-	-	-	
	<b>Net weight/unit (kg)</b>		2.7	-	4.7	5.8	4.4	5.9	-	-	-	-	-	
<b>SRP</b>	<b>Pieces / unit</b>		70	54	50	50	28	28	23					
	<b>Net weight/unit (kg)</b>		1.4	1.5	1.9	2.4	1.5	2.0	2.5					

Identification Imprint: 7018-G / KRVO 1 Tip Color: purple

Kryo<sup>®</sup> t.rev.C-EN28-01/10/18

# Kryo<sup>®</sup> 1

## EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Code	Type
<b>General structural steels</b>	
EN 10025	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	L290 GA, L360 GA
EN 10208-2	L290, L360, L415, L445
API 5LX	X42, X46, X52, X60, X65, X70
EN 10216-1	P275T1
EN 10217-1	P275T2, P355N
<b>Fine grained steels</b>	
EN 10025 part 3	S275, S355, S420, S460
EN 10025 part 4	S275, S355, S420, S460
EN 10025 part 6	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)							
2.5x350	55-80	DC+	59	85	0.72	19.3	86	1.65
3.0x350	70-110	DC+	74	256	0.93	30.2	52	1.58
3.2x350	80-140	DC+	66	220	1.2	37.7	48	1.79
3.2x450	80-140	DC+	78	259	1.3	48.7	35	1.72
4.0x350	120-170	DC+	77	355	1.6	54.1	29	1.59
4.0x450	120-170	DC+	90	450	1.8	68.4	23	1.56
5.0x450	180-240	DC+	104	784	2.4	105.2	15	1.53

\*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	80A	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