

# Low temperature basic electrode

## Classification

AWS A5.5 : E 8018-G-H4R  
ISO 2560-A : E 50 6 Mn1Ni B 32 H5

## General description

The basic all position offshore electrode with max. 1% Ni  
Excellent mechanical properties (impact at -60°C)  
Good CTOD at -10°C  
Extremely low hydrogen content  
110 - 120% recovery  
Weldable on AC and DC  
Vacuum sealed Sahara ReadyPack®: H<sub>DM</sub> < 3 ml/100g  
Also available in carton boxes

## Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3Gup PE/4G PF/5Gup

## Current type

AC / DC + / -

## Chemical composition (w%), typical, all weld metal

C	Mn	Si	P	S	Ni	H <sub>DM</sub>
0.05	1.5	0.5	0.010	0.005	0.95	2 ml/100g

## Mechanical properties, 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)	
					-40°C	-60°C
Required: AWSA5.5		min. 460	min. 550	min. 19	not required	
ISO 2560-A		min. 500	560-720	min. 18	min. 47	
Typical values	AW	550	640	24	140	80
	SR: 580°C/15h	460	550	19		

CTOD value at -10°C > 0.25 mm

## Packaging and available sizes

	Diameter (mm)	2.5	3.2	3.2	4.0	4.0	5.0
	Length (mm)	350	350	450	350	450	450
Unit: Box	Pieces / unit	135	120	120		85	55
	Net weight/unit (kg)	2.7	4.7	5.8		5.9	5.7
Unit: SRP	Pieces / unit	70	50	50	28	28	23
	Net weight/unit (kg)	1.4	1.9	2.0	1.5	2.0	2.5

## Identification

Imprint: 8018-G / KRYO 1P

Tip Color: purple

Kryo® 1P: rev. EN 21

**Materials to be welded**

Steel grades/Code	Type
<b>General structural steel</b>	
EN 10025	S275, S355
<b>Ship plates</b>	
ASTM A131	Grade A, B, D, E, AH 32 to EH 40
<b>Cast steel</b>	
EN 10213-2	GP 240R
<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
EN 10216-1	P275 T1
EN 10217-1	P275 T2, P355 N
<b>Fine grained steel</b>	
EN 10113-2	S275, S355, S420, S460
EN 10113-3	S275, S355, S420, S460
EN 10137-2	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
2.5 x 350	55 - 85	DC+	59	85	0.72	19.3	86	1.65
3.2 x 350	80 - 145	DC+	66	220	1.2	37.7	48	1.79
3.2 x 450	80 - 145	DC+	78	259	1.3	48.7	35	1.72
4.0 x 350	120 - 185	DC+	77	355	1.6	54.1	29	1.59
4.0 x 450	120 - 185	DC+	90	450	1.8	68.4	23	1.56
5.0 x 450	180 - 270	DC+	104	784	2.4	105.2	15	1.53

\* stub end 35 mm

**Welding parameters, optimum fill passes**

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