

Basic low strength electrode

Classification

AWS A5.1 : E6018 (according classification 1966)
EN 499-94 : E 35 4 B 32 H5

General description

Basic extremely low hydrogen electrode $H_{DM} < 3$ ml/100 g (SRP)
Repairs and tie-ins in oil and gas transport pipe lines
Low yield and ultimate tensile strength, high impact toughness
Buffer layer electrode for internally clad stainless steel
Only available in vacuum sealed Sahara ReadyPack® (SRP) $H_{DM} < 3$ ml/100g

Welding positions



Current type

AC / DC electr. + / -

Approvals

CTL

+

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

C	Mn	Si	H_{DM}
0.03	0.4	0.25	3 ml/100 g

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)		
					-18°C	-20°C	-40°C
Required: AWS A5.1-91		min. 331	min. 414	min. 22	min. 27		
EN 499-94		min. 355	440-570	min. 22	min. 47		
Typical values	AW	390	450	28	>200		

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Unit: SRP	Pieces / unit	23	17	28
	Net weight/unit (kg)	0.5	0.7	1.5

Identification Imprint: 6018/Kardo

Tip colour: black

Kardo®: rev. EN 15

Materials to be welded

Pipe line and low alloyed steel, clad with CrNi- and CrNiMo-stainless steel to weld the buffer layer on stainless one side welded root run.

High strength fine grained steel as StE 460 for NH3 storage tanks, to weld very soft, ferritic cap layers

Pipe line steel grades, to weld low yield strength fillet welds in split-T-joints (system NederlandseGasunie)

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	60 - 80	DC+	81	173	0.5	19.7	81	1.60
3.2 x 350	90 - 120	DC+	84	252	1.0	36.5	43	1.58
4.0 x 350	120 - 160	DC+	79	448	1.6	53.0	29	1.56

* stub end 35 mm

Welding parameters, optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	80	80	80	85	80	80
3.2	140	120	145	120	120	120
4.0	150	140	150	140	135	140

Application Advice

Use electrodes directly from Sahara ReadyPack.

Restrict dilution on stainless steel root runs.