EMR SAHARA®

Conarc® 55 CT

High strength basic electrode

SMAW

Classification

AWS A5.5-96 : E8018-W2 HR4*
EN 499-95 : E 46 5 Mn1Ni B 32 H5*

* Deviation: see remarks

General description

Basic all position electrode for welding weather resistant steel
Very suitable for off- and on-shore constructions, high resistance to corrosion caused by seawater or combinations of oil, gas and seawater
Excellent mechanical properties (impact at -50°C)
Extremely low hydrogen HDM <3ml/100g (SRP)
Only available in vacuum sealed Sahara ReadyPack® (SRP) HDM <3 ml/100g

Welding positions

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

Current type

AC / DC electr. + / -

Approvals

LR
4Y42H5

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

C	Mn	Si	P	S	Ni	Cu	HDM
0.05	1.5	0.4	0.010	0.015	0.9	0.4	2ml/100g

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) -18°C	-20°C	-40°C	-50°C
Required: AWS A5.5-96		min. 460	min. 550	min. 19	min. 27			
EN 499-95		min. 460	min. 530	min. 20				min. 47
Typical values	AW	540	610	25		115	100	60

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: SRP	Pieces / unit (nominal)	70	50	28	23
	Net weight/unit (kg)	1.4	1.9	1.6	2.5

Identification Imprint: 8018-W2/Conarc 55CT Tip colour: black

LINCOLN® ELECTRIC

Conarc® 55 CT

Materials to be welded

Steel	Code	Type
Weather resisting steel	EN 10155	S235 J0W
		S235 J2W
		S355 J0W
		S355 J2W
		S355 K2G1W

Weather resistant steels like: Cor-Ten®, Patinax®-F, Patinax®-37 and similar Ni- and Cu-alloyed steels

Calculation Data

Sizes Diam. x length	Current range	Current type	Arc time - per electrode at max. current -	Energy - per electrode at max. current -	Dep.rate - per electrode at max. current -	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
(mm)	A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
2.5 x 350	55 - 85	DC+	53	81	0.77	19.7	88	1.74
3.2 x 350	80 - 145	DC+	70	223	1.2	36.9	43	1.60
4.0 x 350	120 - 185	DC+	77	355	1.6	54.1	29	1.59
5.0 x 450	180 - 270	DC+	104	784	2.4	105.2	15	1.53

* stub end 35mm

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	110	110	115	110	105	110
3.2	140	120	145	120	120	120
4.0	150	140	150	140	135	140
5.0	220	210	210	170		

Remarks

Deviations: chemical composition:

Mn = 1.4 - 1.9%	AWS: Mn = 0.50 - 1.30%	
Si = 0.15 - 0.60%	AWS: Si = 0.35 - 0.80%	
Cr = 0.1%	AWS: Cr = 0.45 - 0.75%	EN: Cr = 0.2%
Ni = 0.7 - 1.0%	AWS: Ni = 0.40 - 0.80%	
Cu = 0.3 - 0.5%	EN: Cu max. 0.3%	