SL® 19G

EMR SAHARA®

CLASSIFICATION

AWS A5.5 : E8018-B2-H4
EN 1599 : E CrMo1 B 32 H5

GENERAL DESCRIPTION

Basic very low hydrogen all position electrode (HDM< 5 ml/100g)
For welding creep and hydrogen resistant CrMo-steels
Maximum service temperature 550°CDC-welding preferred
115 - 120% recovery
Also available in vacuum sealed Sahara ReadyPack®(SRP)

WELDING POSITIONS

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

CURRENT TYPE

AC / DC + / -

APPROVALS

BV	DNV	RINA	TÜV
C1M	1Cr0,5Mo	C1M	+

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

C	Mn	Si	P	S	Mo	Cr	H_{DM}
0.06	0.75	0.6	0.015	0.01	0.5	1.1	3 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	Impact ISO-V(J) -20°C
Required: AWS A5.5	SR[1]	min. 460	min. 550	min. 19	not required	
EN 1599	SR[2]	min. 355	min. 510	min. 20	min. 47	
Typical values	SR[3]	570	640	24	140	100

Stress relieved: SR[1] = 690±14°C/1h, SR[2] = 660-700°C/1h, SR[3] = 700°C/1h

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: carton box	Pieces / unit	120	120	85	55
	Net weight/unit (kg)	2.6	4.6	4.7	6.1
Unit: SRP	Pieces / unit	67	50	28	23
	Net weight/unit (kg)	1.4	2.0	1.5	2.6

Identification Imprint: 8018-B2 / SL 19 G Tip Color: red

SL® 19G: rev. EN 22

LINCOLN ELECTRIC THE WELDING EXPERTS®

SL® 19G

MATERIALS TO BE WELDED

Steel grades/Code	Type
Creep resistant steels	
EN 10028-2	13 CrMo 4-5
EN 10083-1	25 CrMo 4
EN 10222-2	14 CrMo 4-5
Tool steels	
DIN 17210	16 MnCr 5
EN 10025 part 4	S275, S355, S420

CREEP DATA

Test temperature °C	400	450	500	550	600
Yield strength Rp-0,2% (N/mm²)	460	440	430		
Creep strength Rm/1000 (N/mm²)			300	140	(80)
Creep strength Rm/10.000 (N/mm²)		350	240	110	(50)
Creep resistance Rp1%/10.000 (N/mm²)		250	170	80	(35)

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time (S)*	Energy E(kJ)	Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weld-metal B	kg electrodes/ kg weldmetal 1/N
			- per electrode at max. current -					
2.5x350	60-90	DC+	63	114	0.71	21.0	80	1.67
3.2x350	80-130	DC+	68	227	1.3	37.9	41	1.56
4.0x350	120-180	DC+	79	367	1.6	54.9	29	1.59
5.0x450	160-240	DC+	103	777	2.5	106.9	14	1.52

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PF/5Gup
2.5	80A	85A	80A	85A	80A	80A
3.2	130A	120A	130A	120A	120A	120A
4.0	150A	145A	140A	140A	140A	140A
5.0	225A	225A	210A			

REMARKS / APPLICATION ADVICE

Recommended preheat temperature:200 - 250°C
Recommended tempering heat treatment range:660 - 700°C (time depends on material thickness)
Electrodes after removal from cardboard boxes redry 2-4h 350 ±25°C