

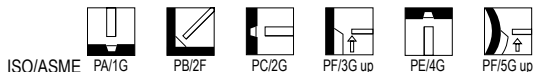
**CLASSIFICATION**

AWS A5.5 : E8018-B1-H4  
 ISO 3580-A : E Z B 32 H5

**GENERAL DESCRIPTION**

Basic very low hydrogen all position electrode ( $H_{DM} < 5 \text{ ml/100g}$ )  
 For welding creep resistant CrMoV-steels  
 Maximum service temperature 550°C  
 DC-welding preferred  
 115 - 120% recovery  
 Only available in vacuum sealed Sahara ReadyPack®(SRP)

**WELDING POSITIONS**



**CURRENT TYPE**

AC / DC + / -

**APPROVALS**

TÜV

+

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

C	Mn	Si	P	S	Cr	Mo	$H_{DM}$
0.06	0.8	0.6	0.020	0.010	0.5	0.5	3 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	-10°C
Required: AWS A5.5	SR <sup>1</sup>	min. 460	min.550	min. 19	not required	
Typical values	SR <sup>2</sup>	570	640	24	180	110

Stress relieved: SR<sup>1</sup> = 690±14°C/1h, SR<sup>2</sup> = 1h/730°C

**PACKAGING AND AVAILABLE SIZES**

	Diameter (mm)	2.5	3.2	4.0	5.0
Length (mm)	350	350	350	350	350
Unit: SRP	Pieces / unit	67	50	28	23
	Net weight/unit (kg)	1.4	2.0	1.5	2.6

Identification Imprint: 8018-B1 / SL 22 G Tip Color: orange

SL® 22G: rev. EN 23

# SL<sup>®</sup> 22G

## MATERIALS TO BE WELDED

Steel grades/Code	Type
<b>Creep resistant steels</b>	
DIN	14MoV6-3 17MnMoV6-4 10CrSiMoV7 24CrMoV5-5

## CREEP DATA

Test temperature °C	400	450	500	550	575
Yield strength Rp-0.2% (N/mm <sup>2</sup> )	480	470	450		
Creep strength Rm/1000 (N/mm <sup>2</sup> )			270	170	150
Creep strength Rm/10.000 (N/mm <sup>2</sup> )			250	150	130
Creep resistance Rp1%/10.000 (N/mm <sup>2</sup> )			210	130	110

## CALCULATION DATA

Sizes		Current type	Arc time (S)*	Energy - per electrode at max. current - E(kJ)	Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weld-metal B	kg electrodes/ kg weldmetal 1/N
Diam. x length (mm)	Current range (A)							
2.5x350	60-90	DC+	64	115	0.7	21.0	82	1.69
3.2x350	80-130	DC+	71	238	1.2	37.5	41	1.54
4.0x350	120-180	DC+	76	353	1.6	55.8	30	1.64
5.0x450	160-220	DC+	101	762	2.6	106.6	14	1.49

\*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 - 300°C

Recommended tempering heat treatment range:700 - 730°C (time depends on material thickness)