SUPERON®
Premium Welding Consumables

SUPERON SCHWEISSTECHNIK INDIA LTD.
World Class Welding Electrodes
In Technical Collaboration with M/s Kjellberg Finsterwalde gmbh, Germany.

Rutile type stainless Steel electrode

SUPER OPTIMAL 309L

Classification

***AWS A* 5.4:** E 309L- 16 ***DIN 8556*:** E 23 12 LR 23

DIN EN 1600: E 23 12 LR 12 ***Werkstoff Nr:*** 1.4332

Description and applications

Low carbon Rutile-basic electrode with an austenitic stainless steel deposit containing 15% ferrite- for welding dissimilar steels as stainless steels to low alloyed steels. Also suitable for welding high temperature steels and as buffer layer before hardfacing. For repairing of machine parts for civil engineering. First layer on construction steels for 18/8 cladding. Soft fusion, nice aspect of the bead, self releasing slag.

Base materials

Stainless steels for general use and for high temperature applications:				
UNS	**Alloy**	**EN**	**Material Na**	**UGINE**
S30900	309	X15CrNiSi 20-12	1.4828	UGINOX R20-12
S30453	304LN	X2CrNiN 18-10	1.4311	
S30908	3098	X12CrNi23-13	1.4833	UGINOX R24-13S
		X1OCrSiG	1.4712	
		X10CrA1 18	1.4742	

All weld metal mechanical properties (typical)

Tensile Strength R_m (N/Mm^2)	Elongation %	ISO- V J RT
600	> 35	60

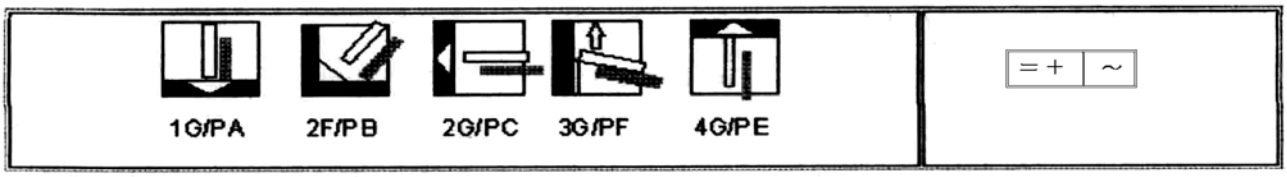
Typical weld Metal chemical Composition (%)

C	Si	Mn	Cr	Ni	Mo	S	P
< 0.03	0.70	0.90	23 - 25	12.50- 14.0	< 0.10	0.010	0.015

Amperes (A)

2.50	3.15	4.00	5.00
60-90	80-120	110-150	150-180

Welding instruction Redrying 1 h at 250º C if necessary. Interpass temperature: <200ºC.



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Product Data Sheet

Rutile type Stainless Steel electrode

SUPER OPTIMAL 309L-17

Classification

***AWS A* 5.4:** E 309L- 17

***DIN 8556*:** E 23 12 LR 23

DIN EN 1600: E 23 12 LR 12

Werkstoff Nr: 1.4332

Description and applications

Rutile type low carbon MMA electrode for joining dissimilar steels (austenitic to ferritic steels) and for cladding of austenitic steels. Weld metal consists of austenite with approx 15% delta ferrite. Cladding on unalloyed and low-alloy steels are corrosion resistant in the first layer.

Good fusion of joint faces, finely rippled bead surface, easy slag removal, excellent arc striking and re-striking.

Packed in vac-pack system.

Base materials

Stainless steels for general use and for high temperature applications:				
UNS	**Alloy**	**EN**	**Material Na**	**UGINE**
S30900	309	X15CrNiSi 20-12	1.4828	UGINOX R20-12
S30453	304LN	X2CrNiN 18-10	1.4311	
S30908	3098	X12CrNi23-13	1.4833	UGINOX R24-13S
		X1OCrSiG	1.4712	
		X10CrA1 18	1.4742	

All weld metal mechanical properties (typical)

Tensile Strength R_m (N/mm^2)	Elongation %	ISO- V J RT
600	>35	60

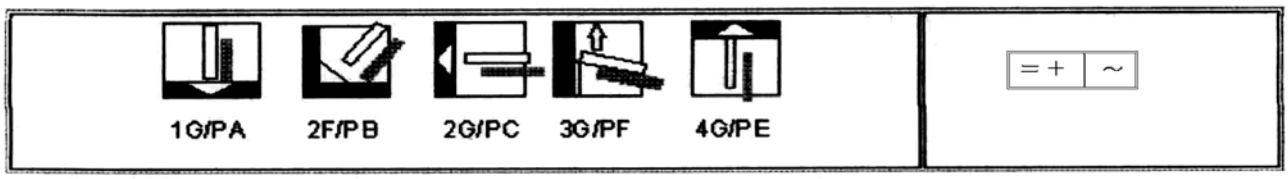
Typical weld metal Chemical composition (%)

C	Si	Mn	Cr	Ni	Mo	S	P
0.03	0.90	0.90	23.80	12.80	0.10	0.012	0.020

Amperes (A)

2.50	3.15	4.00	5.00
60-80	80-120	110-150	150-180

Welding instruction Redrying 1 h at 250º C if necessary. Interpass temperature: <200ºC.



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