

INOX R309L

Electrodes MMA [SMAW]

Stainless and high alloyed steels

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 3581-A : E 23 12 LR 12 DIN 8556 : E 2312L R 12 AWS A-5.4 : E 309L-16 W.Nr. : 1.4332	UDT	Power generation industry Constructions & Engineering Metallurgy (Steelworks) Mining Petrochemical and chemical industry Shipbuilding&Offshore

- Rutile low carbon electrode for welding homogeneous heat resistant steels and steel castings.
- Weld deposit resistant to scaling up to 1000°C.
- Recommended for welding dissimilar steels (low alloy steels with stainless steels).
- Perfect as a buffer layer for overlays with special properties.

Application

Furnaces (burners, doors, fans, piping, recuperators, grates, blower boxes), paper mill equipment, petroleum refining (catalytic recovery systems, recuperators), power generation (dust burners, pipe hangers), thermal treatment, waste incineration plants, rotary kilns, calciners, automotive exhaust system components, heat exchangers, glass blowing components, aircraft parts, boiler partitions, hearth linings, porcelain kiln baskets, annealing containers, inserts for chimneys operating in dry conditions.

Base material

PN	DIN	W.Nr.	AISI/ASTM
H20N12S20	X15 CrNiSi 20 12	1.4828	309
H23N13	X7 CrNi 23 14	1.4833	309S
H6S2	X10 CrAl 7	1.4713	
H13JS	X10 CrAl 13	1.4724	405
H18JS	X10 CrAl 18	1.4742	
0H18N12Nb	X6 CrNiNb 18-10	1.4550	347
		1.4583	318
H6S2	X10 CrSi 6	1.4712	
H20N12S20	X15 CrNiSi 20-12	1.4828	309
	G-X 30 CrSi 6	1.4710	
	G-X 40 CrSi 17	1.4740	
	G-X 40 CrNiSi 22 9	1.4826	
0H18N10T, 1H18N9T, 1H18N10T	X8 CrNiTi 18-10	1.4541	321
	G-X 25 CrNiSi 18-9	1.4825	
	G-X25 CrNiSi20 14	1.4832	
0H18N9	X5 CrNi18 10	1.4301	304
00H18N10	X2 CrNi18 11	1.4306	304L
	G-X10 CrNi18 8	1.4312	305
	X2 CrNiN18 10	1.4311	304LN

Typical chemical composition %

C	Si	Mn	Cr	Ni
<0,04	<0,90	0,70	23,00	13,00

Typical mechanical properties	
Yield strength Re [N/mm2]	>320
Tensile strength Rm [N/mm2]	>510
Elongation A5 [%]	>25
Impact energy Kv [J]	>47J (20°C) /
Hardness	210HB /
Coating type	rutile
Ferrite content	FN = app. 15
Welding current	
Welding positions	
Redrying	300 - 350°C / 2 h
Additional description	Austenitic microstructure with ferrite at the level of 8-20FN. Preheat and interpass temperatures depend on the base material. Non-hardenable steels do not require preheating. Hardenable steels up to 250 [°C].

Welding parameters and packing					
Ø	Length [mm]	Welding current [A]	Weight of packet [kg]	Weight of carton [kg]	Pcs/1 kg
2,5	300 /	60-90	1,5	9,0	55
3,2	350 /	70-100	1,7	10,2	28
4,0	350 /	110-160	1,5	9,0	19
5,0	350 /	160-230	1,7	10,2	

METALWELD-FIPROM POLSKA spółka z o.o.

ul. Mikołajczyka 57, 41-200 Sosnowiec

+48 (32) 297 75 50 - 51

+48 (32) 297 75 88

export@metalweld.pl