

## COREFIL 309LP

Flux cored wires [FCAW]

Stainless and high alloyed steels

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 17633-A : T 23 12 LP C1 (M21) 1 DIN 8556 : 23 12 L AWS A-5.22 : E 309LT1-1/4 W.Nr. : 1.4459		Power generation industry Constructions & Engineering Metallurgy (Steelworks) Petrochemical and chemical industry Shipbuilding&Offshore

- Rutile flux cored wire for welding stainless steels of the 23% Cr - 13% Ni type, as well as for welding stainless steels with unalloyed and high-alloy ferritic structural steels, high-alloy with unalloyed and low-alloy steels
- For welding ferritic and martensitic high-alloy steels with a Cr content of 13-17%.
- For welding type 309 steels and heat-resistant steels with working temperatures up to 1000°C.
- For cladding non-alloy steels.
- Especially recommended for high-performance welding in all positions.
- Very stable arc, self-removing slag.
- Light joint with very fine scale. Joint resistant to working temperature up to 1000°C.
- As a buffer layer applied to unalloyed steels prior to welding with COREFIL 308LP material.

### Application

Furnaces (burners, doors, fans, piping, recuperators, grates, blower boxes), paper mill equipment, oil 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

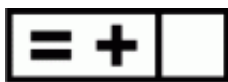

AISI/ASTM	DIN	W.Nr.
	G-X25 CrNiSi 18 9	1.4825
	G-X40 CrNiSi22 9	1.4826
309	X15 CrNiSi20 12	1.4828
	G-X25 CrNiSi20 14	1.4832
304	X5 CrNi18 10	1.4301
304L	X2 CrNi18 11	1.4306
305	G-X10CrNi18 8	1.4312
304LN 302, 304	X2 CrNi18 10	1.4311
321	X10 CrNiTi18 9	1.4541
347	X6 CrNiNb18 10	1.4550
	X10 CrSi6	1.4712
	X10 CrAl13	1.4724
	X10 CrAl18	1.4742
	X10 CrAl7	1.4713
	X10 CrAl13	1.4722
	X10 CrSi18	1.4741
	X12 CrNiTi18 9	1.4878
CF 8	G-X5 CrNi19 10	1.4308
347H	X10CrNiNb	1.4912
CF 8C	G-X5 CrNiNb 19 10	1.4552
1045, 1043	C45	1.0503

Dissimilar joints (alloyed and unalloyed steels for CrNi or CrNiMo)		
Surface restoration on alloy and non-alloy steels		
Connections of manganese steels and their surfacing.		
High temperature steels type 22NiMoCr 4-7, 20MnMoNi 5-5 and G18NiMoCr 3-7		

#### Typical chemical composition %

<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>Cr</b>	<b>Ni</b>
0,03	0,64	1,33	23,60	13,00

#### Typical mechanical properties

<b>Yield strength Re [N/mm<sup>2</sup>]</b>	420
<b>Tensile strength Rm [N/mm<sup>2</sup>]</b>	585
<b>Elongation A5 [%]</b>	35
<b>Impact energy Kv [J]</b>	50J (0°C) /
<b>Wire/rod type</b>	rutile cored
<b>Flux type</b>	rutile
<b>Welding current</b>	
<b>Welding positions</b>	
<b>Shielding gases acc. to EN ISO 14175</b>	C1 - 100% CO <sub>2</sub> / M21 - Ar + 15 - 25% CO <sub>2</sub> /

#### Welding parameters and packing

∅	Welding current [A]	Voltage [V]	Gas flow	Weight of packet [kg]
1,2	130 - 280	21 - 34	20 - 25	15,0

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