



G-TECH 308L

SMAW

AUSTENITIC STAINLESS STEELS
308L

DESCRIPTION

Rutile-basic coated electrode for 304L austenitic stainless steels base materials

Its basic-rutile coating ensures an excellent combination of welding performance in all positions, except for vertical down, and a high resistance to cracking providing smooth arc transfer. Excellent weldability with a spatter free arc and self-releasing slag result in a very smooth bead appearance. These electrodes are used to weld 18Cr/8Ni stainless steels. Mainly applications include food industries, pharmaceutical equipment and general fabrication. Typical service temperatures are -100°C to 400°C.

SPECIFICATIONS

EN ISO 3581-A	E 19 9 L R 32	AWS A5.4	E308L-16
Shielding	-	Positions	PA, PB, PC, PD, PE, PF
Current	DC+, AC	Packaging Type	Carton box

ASME QUALIFICATIONS

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS
F-No (QW432)	5	3-12 FN	19.83
A-No (QW442)	8		76HRB

CHEM. COMP. %

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.025	Tensile strength R _m MPa	510	520
Mn	0.9	Yield strength R _{p0.2} MPa	320	320
Ni	9.5	Elongation A (L ₀ =5d ₀) %	30	38
Cr	19.5	Impact Charpy ISO-V	-	60J @ 20°C
P	0.02	Impact Charpy ISO-V	-	-
S	0.01			
Mo	0.1			
Si	0.8			
Cu	0.1			

WELDING PARAMETERS	2.5 mm	3.2 mm	4.0 mm	5.0 mm
Ampere	50A - 80A	80A - 110A	110A - 150A	160A - 210A
Voltage	-	-	-	-
Packaging	56 pcs/kg	28 pcs/kg	19 pcs/kg	12 pcs/kg
Packaging Type	Carton box	Carton box	Carton box	Carton box

NOTES

Pcs/kg is indicative, actual number may vary ± 5%.



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APPLICATION

The 308L subfamily is specifically designed for the welding of 18/8 series stainless steels, including 301, 302, 303, and 304LN that contain nitrogen, as well as titanium-stabilized steels such as 321. The operating temperature range generally extends from -100°C to about 400°C. These consumables are ideal for a variety of applications ranging from the food sector to breweries, pharmaceutical equipment, construction and general building, to nuclear engineering. However, 308L products are not suitable for use with 304/304H steels in structural applications requiring high temperatures; for these needs, it is recommended to consult technical sheets C-10 and C-12. Similarly, for cryogenic applications (-196°C), it is advisable to refer to technical sheet B-37. No preheat is necessary and the maximum interpass temperature is set to 250°C; also, no post-weld heat treatment (PWHT) is required.

ALLOY TYPE

308L austenitic stainless steels for joining 304L base materials.

MICROSTRUCTURE

Austenite with a controlled level of ferrite, normally in the range 3-12FN depending on the application.

MATERIALS

EN W.Nr.: 1.4306 (X2CrNi19-11), 1.4301 (X5CrNi18-10), 1.4311 (X2CrNiN18-10), 1.4308 (X5CrNi19-10), 1.4541 (X6CrNiTi18-10), 1.4543 (X 3 CrNiCuTi 12-9), 1.4561 (X1CrNiMoTi18-13-2), 1.4550 (X6CrNiNb18-10)+

ASTM: 304L, 304, 304LN, CF3, CF8, 321, 347

UNS: S30403, S30400, S30453, S32100, S34700

WELDING & PWHT

Supply of welding consumables with optimized performance for strength and durability, including special alloys for high-temperature applications.

