



G-TECH 308LB

SMAW

AUSTENITIC STAINLESS STEELS
308L

DESCRIPTION

Basic coated low carbon electrode for 304L austenitic stainless steels base materials

Wire with a typical ferrite content of 0.5 FN maximum that provides a fully austenitic and non-magnetic weld deposit. The high level of Mn content ensures freedom from micro cracking and helps to stabilize the austenitic microstructure and aids in hot cracking resistance. Suitable for low temperature applications down to -269°C (e.g. LPG and LNG storage vessels) and where non-magnetic property is required. This filler metal also exhibits good corrosion resistance in acids and seawater, and is particularly suited for corrosion conditions found in urea synthesis plants.

SPECIFICATIONS

EN ISO 3581-A	E 19 9 L B 42	AWS A5.4	E308L-15
Shielding	-	Positions	PA, PB, PC, PD, PE, PF
Current	DC+;	Packaging Type	Carton box

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS
F-No (QW432)	5	3-12 FN	20.33
A-No (QW442)	8		76HRB

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.035	Tensile strength R _m MPa	510	520
Mn	1.7	Yield strength R _{p0.2} MPa	320	320
Ni	9.5	Elongation A (L ₀ =5d ₀) %	30	38
Cr	20	Impact Charpy ISO-V	-	80J @ 20°C
P	0.02	Impact Charpy ISO-V	-	40J @ -196°C
S	0.01			
Mo	0.1			
Si	0.7			
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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DESCRIPTION

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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.

