



G-TECH 308HB



AUSTENITIC STAINLESS STEELS
308H

DESCRIPTION

Basic coated electrode for 304/304H base material for high service temperature service

Its basic coating ensures excellent positional welding characteristics with good gap bridging ability. The weld pool and slag are easy to control and facilitate the achievement of a clean bead surface even in narrow preparations and in root pass. Ease of slag removal reduces post-welding cleaning operations to a minimum. These products are suitable to weld heavy thick (>12mm) of 321H and 347H to avoid typical service HAZ cracking of these grades. Mainly applications include petrochemical and chemical process plant. Typical service temperatures are 400°C to 800°C.

SPECIFICATIONS

EN ISO 3581-A	E 19 9 H B 4 2	AWS A5.4	E308H-15
Shielding	-	Positions	PA, PB, PC, PD, PE, PF
Current	DC+;	Packaging Type	Carton box

ASME QUALIFICATIONS

FERRITE

PREN

F-No (QW432)	5	2-8 FN	20.33
A-No (QW442)	8		

CHEM. COMP. %

MECHANICAL PROPERTIES

MIN. PER STANDARD

PRODUCT

C	0.06	Tensile strength R _m MPa	550	560		
Mn	1.4	Yield strength R _{p0.2} MPa	350	400		
Ni	10	Elongation A (L ₀ =5d ₀) %	30	35		
Cr	20	Impact Charpy ISO-V	-	100J @ 20°C		
P	0.015	Impact Charpy ISO-V	-	-		
S	0.002					
Mo	0.1					
Si	0.85					
Cu	0.05					
		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

308H consumables are specifically designed for applications involving unstabilized 18Cr-10Ni austenitic stainless steels, offering high resistance to elevated temperatures and oxidation. These steels and weld metal have a carefully controlled carbon content between 0.04% and 0.08%. The levels of chromium (Cr) and nickel (Ni) in the weld metal are kept low, and the ferrite is regulated to minimize brittleness due to sigma phase formation. Minor elements and impurities, both beneficial and harmful, are controlled to optimize high-temperature properties. It is crucial that these consumables exclude components containing bismuth, ensuring a Bi level below 0.002% as required by API 582 standards. 308H consumables are also recommended for welding stabilized grades 321H or 347H thicker than 12 mm, preventing cracking in the heat-affected zone (HAZ) and low ductile fracture resistance to creep when using 347 weld metal. It is important to note that some standards suggest the use of 16-8-2 type alloys for these steels, including 304H. 308H is widely used in petrochemical and chemical processing plants, particularly in the construction of cyclones and transfer lines used to recirculate the catalyst in catalytic crackers (cat crackers) operating between 400 °C and 815 °C. Preheat is not required; the maximum interpass temperature is 250 °C. No post-weld heat treatment (PWHT) is required.

ALLOY TYPE

High carbon 308 austenitic stainless steels.

MICROSTRUCTURE

Austenite with delta ferrite controlled 2-8FN.

MATERIALS

For 304/304H materials used at elevated temperatures.

EN W.Nr.: 1.4948 (X 6 CrNi 18 11)

ASTM: 304H, A351 Gr CF10, CF8

UNS: S30409

