



# DAIKOWT 347

GTAW

AUSTENITIC STAINLESS STEELS

347

## DESCRIPTION

### Rod for stabilized austenitic stainless steels

These Cr-Ni rods are stabilized with niobium for welding steels like 321 and 347, which are stabilized with titanium or niobium. The presence of niobium reduces susceptibility to intergranular corrosion under severe conditions. They are also suitable for cladding on mild steels, using a 309 buffer layer. The service temperatures typically range from -100 °C to about 400 °C. If dilution by the base metal leads to a low-ferrite or fully austenitic deposit, the susceptibility to cracking can increase significantly.

## SPECIFICATIONS

EN ISO 14343-A	W 19 9 Nb S	AWS A5.9	ER347
Certifications	CE	Shielding	11
Positions	PA, PB, PC, PD, PE, PF	Current	DC-
Packaging Type	5kg carton tube		

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS	
F-No (QW432)	6	3-12 FN	19.165	84HRB
A-No (QW442)	8			

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.05	Tensile strength R <sub>m</sub> MPa	550	660
Mn	0.7	Yield strength R <sub>p0.2</sub> MPa	350	450
Ni	10	Elongation A (L <sub>0</sub> =5d <sub>0</sub> ) %	25	42
Cr	19	Impact Charpy ISO-V	-	150J @ -50°C
Nb	0.4	Impact Charpy ISO-V	-	-
P	0.02			
S	0.01			
Mo	0.05			
Si	0.9			
Cu	0.07			
		<b>WELDING PARAMETERS</b>	1.6 mm	2.4 mm
		Ampere	80A - 100A	110A - 160A
		Voltage	-	-
		Packaging	Ø 1,0÷4,0 mm	Ø 1,0÷4,0 mm
		Packaging Type	5kg carton tube	5kg carton tube



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# 347

DESCRIPTION

AUSTENITIC STAINLESS STEELS

347

## APPLICATION

This material is designed for welding 18/8 stainless steels, specifically types 321 and 347, stabilized with titanium and niobium. It is also compatible with non-stabilized grades such as 304/304L. Typical operating temperatures range from -100 °C to about 400 °C. The main applications include the food industry, breweries, pharmaceutical equipment, construction, general engineering, and nuclear engineering. However, 347 series consumables are generally not recommended for structural applications at high temperatures where a carbon percentage between 0.04% and 0.08% is required for creep resistance, as specified in the 347H data sheets. For cryogenic applications requiring a Charpy lateral expansion greater than 0.38 mm at -196 °C, it is preferable to use a non-stabilized filler metal with low carbon content and controlled ferrite. Preheating is not necessary and the maximum interpass temperature is 250 °C; post weld heat treatment (PWHT) is not required.

## ALLOY TYPE

347 austenitic stainless steel for joining 321 and 347 base materials.

## MICROSTRUCTURE

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

## MATERIALS

**EN W.Nr.:** 1.4541, 1.4543, 1.4561, 1.4550, 1.4552 (cast)

**ASTM:** 321, 347, CF8C (cast)

**UNS:** S32100, S34700

