DAIKOWT 347Si

GTAW

AUSTENITIC STAINLESS STEELS
347

DESCRIPTION

Rod for stabilized austenitic stainless steels

These Cr-Ni rods are stabilized with niobium and are suitable for welding steels stabilized with titanium or niobium. The presence of niobium reduces sensitivity to intergranular corrosion even under severe conditions. They are also suitable for cladding mild steels with a buffer layer in 309. Typical service temperatures range from -100°C to approximately 400°C. The higher silicon content compared to standard 347 increases the weld fluidity and enhances the bead appearance.

SPECIFICATIONS

EN ISO 14343-A	W 19 9 Nb S	**AWS A5.9**	ER347Si
Certifications	CE	**Shielding**	I1
Positions	PA, PB, PC, PD, PE, PF	**Current**	DC-
Packaging Type	5kg carton tube		

ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	8

FERRITE

3-12 FN

PREN

19.165

HARDNESS

84HRB

CHEM. COMP. %	DEFAULT
C	0.05
Mn	0.7
Ni	10
Cr	19
Nb	0.4
P	0.02
S	0.01
Mo	0.05
Si	0.9
Cu	0.07

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	550	660
Yield strength $R_{p0.2}$ MPa	350	450
Elongation A (L_0=5d_0) %	25	42
Impact Charpy ISO-V	-	150J @ -50°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	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

DAIKO

347

DESCRIPTION

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