G-TECH 347R

SMAW

AUSTENITIC STAINLESS STEELS
347

DESCRIPTION

Rutile coated electrode for joining 321 and 347 base materials

Its rutile coating ensures excellent weldability in all positions, except for vertical down, and a high resistance to cracking providing smooth arc transfer. High current carrying capacity, minimum spatter formation and virtually self-cleaning slag produce a concave bead with minimal ripple as well as a smooth and clean weld profile. This electrode is used to weld titanium and niobium stabilized stainless steels types 321 and 347. Also suitable for not stabilized grades such as 304/304L. Typically service temperature is -100 to +400°C.

SPECIFICATIONS

EN ISO 3581-A	E 19 9 Nb R 32	**AWS A5.4**	E347-17
Shielding	-	**Positions**	PA, PB, PC, PD, PE, PF
Current	DC+, AC	**Packaging Type**	Carton box

ASME QUALIFICATIONS

F-No (QW432)	5
A-No (QW442)	8

FERRITE

3-12 FN

PREN

19.5

HARDNESS

84HRB

CHEM. COMP. %

	DEFAULT
C	0.05
Mn	1
Ni	10
Cr	19.5
Nb	0.05
P	0.015
S	0.01
Si	0.09
Cu	0.05

MECHANICAL PROPERTIES

	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	550	580
Yield strength $R_{p0.2}$ MPa	350	350
Elongation A (L_0=5d_0) %	25	25
Impact Charpy ISO-V	-	60J @ 20°C
Impact Charpy ISO-V	-	-

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%.

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