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

ISO 3581-A	E 19 9 Nb R 32	**AWS A5.4**	E347-17
Certifications	-	**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	VARIANT
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 mm	
Ampere	50A - 80A	80A - 110A	110A - 150A	160A -
Voltage	-	-	-	
Packaging	56 pcs/kg	28 pcs/kg	19 pcs/kg	12 p
Packaging Type	Carton box	Carton box	Carton box	Carto

347

DESCRIPTION

APPLICATION

Developed for welding Ti and Nb-stabilized 18Cr/8Ni stainless steel types 321 and 347, they are also suitable for unstabilized grades like 304/304L. Service temperatures typically range from -100°C to about 400°C. The applications parallel those of 308L, covering diverse sectors such as food, brewery, pharmaceutical equipment, architectural and general fabrication, and nuclear engineering. However, the 347 consumables mentioned here are generally unfit for elevated temperature structural applications where 0.04-0.08% carbon is specified for creep resistance; for such cases, consult data sheets 347H. For cryogenic uses requiring >0.38mm (15mils) Charpy lateral expansion at -196°C, select unstabilized weld metal with low carbon and controlled ferrite. No preheating requirement, a recommended maximum interpass temperature of 250°C, and no post-weld heat treatment (PWHT) necessity.

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