DAIKOFCW 347P

FCAW

AUSTENITIC STAINLESS STEELS
347

DESCRIPTION

Rutile all position flux cored wire for 321 and 347 stainless steel base materials

Austenitic rutile flux cored wire for welding and cladding in all positions thanks to the fast-freezing slag. It offers excellent weldability, easy handling and slag control in all positions resulting in high productivity with outstanding welding performance. This consumable is used to weld titanium and niobium stabilized stainless steels types 321 and 347. Also suitable for unstabilized grades such as 304/304L. Typically service temperature is -100 to +400°C.

SPECIFICATIONS

EN ISO 17633-A	T 19 9 Nb P C1/M21 2	**AWS A5.22**	E347T1-1/4
Certifications	CE, TUV	**Shielding**	M21, C1
Positions	PA, PB, PC, PD, PE, PF, PG	**Current**	DC+
Packaging Type	BS300 spool		

ASME QUALIFICATIONS

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

FERRITE

3-12 FN

PREN

19

HARDNESS

84HRB

CHEM. COMP. %

	DEFAULT
C	0.03
Mn	1.3
Ni	10.5
Cr	19
Nb	0.6
P	0.02
S	0.04
Si	0.6

MECHANICAL PROPERTIES

	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	550	610
Yield strength $R_{p0.2}$ MPa	350	420
Elongation A (L_0=5d_0) %	25	30
Impact Charpy ISO-V	-	80J
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

	1.2 mm	1.6 mm
Ampere	120A - 280A	200A - 350A
Voltage	22V - 30V	26V - 30V
Packaging	Ø 1,2÷1,6mm	Ø 1,2÷1,6mm
Packaging Type	BS300 spool	BS300 spool

NOTES

D200 spool, Ø 1,0 mm and high carbon version available upon request.

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