KUANG TAI

KFW-347

Product Data Sheet

Flux Cored Wire for Stainless Steel

Specification

AWS A5.22 E347T1-1/4

Applications

- Suitable for welding titanium and niobium stabilized 18/8 stainless steel types 321 and 347.
- Ideal for welding furnace parts, pressure vessels, chemical tanks and automotive parts.

Characteristics

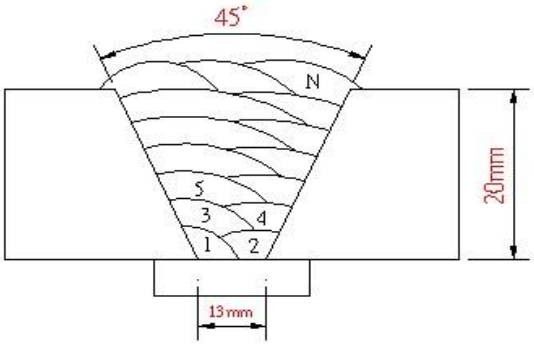
- The Nb content of KFW-347Nb forms a fine and stable carbide, which reduces chromium carbide precipitation and makes the weld metal more resistant to intergranular corrosion.
- Stable arc, good slag removal, easy control of weld puddle, low spatters, X-ray quality welds and good penetration.
- Ideal for all positions welding.

Note on Usage

- Distance between base metal and tip should be kept within the range of 15~25mm.
- Shielding gas flow rate should be kept within 20~25ℓ/min.

Mechanical Properties & Chemical Composition of All Weld Metal

Welding Conditions



[Joint Preparation & Layer Details]

Method by AWS Rules

Diameter(mm)	1.2mm
Shielding Gas	100% CO_2
Flow Rate (l/min)	20
Amp / Volt	200 / 32
Stick-Out (mm)	15-20
Interpass Temp (℃)	175±15
Polarity	DC(+)

- **Mechanical Properties of the Weld Metal**

Brand Name	Tensile Test Results			Charpy V-Notch Impact Value (Joules)		
	Y.S. (MPa)	T.S. (MPa)	EL. (%)	-30℃	-40℃	-60℃
KFW-347	475	661	34	-	-	-
E347T1-1/4	-	520 min	30 min	-	-	-

- **Chemical Analysis of the Weld Metal**

Unit: wt%

Brand Name	C	Si	Mn	P	S	Cr	Ni	Nb
KFW-347	0.03	0.4	1.1	0.03	0.01	19.55	9.8	0.43
E347T1-1/4	<0.08	<1.0	0.5-2.5	<0.04	<0.03	18.0-21.0	9.0-11.0	8XC min 1.0 max

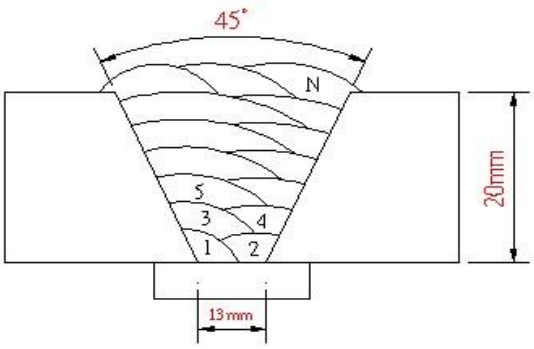
- **Ferrite Number of the Weld Metal**

F.N.= 7

** Ferrite number is calculated by WRC-1992*

Mechanical Properties & Chemical Composition of All Weld Metal

Welding Conditions



[Joint Preparation & Layer Details]

Method by AWS Rules

Diameter(mm)	1.2mm
Shielding Gas	80% Ar+20%CO_2
Flow Rate (l/min)	20
Amp / Volt	200 / 31
Stick-Out (mm)	15-20
Interpass Temp (℃)	175±15
Polarity	DC(+)

Mechanical Properties of the Weld Metal

Brand Name	Tensile Test Results			Charpy V-Notch Impact Value (Joules)		
	Y.S. (MPa)	T.S. (MPa)	EL. (%)	-30℃	-40℃	-60℃
KFW-347	510	683	34	-	-	-
E347T1-1/4	-	520 min	30 min	-	-	-

Chemical Analysis of the Weld Metal

Unit: wt%

Brand Name	C	Si	Mn	P	S	Cr	Ni	Nb
KFW-347	0.02	0.5	1.4	0.02	0.01	19.97	10.73	0.59
E347T1-1/4	<0.08	<1.0	0.5-2.5	<0.04	<0.03	18.0-21.0	9.0-11.0	8XC min 1.0 max

Ferrite Number of the Weld Metal

F.N.= 6

** Ferrite number is calculated by WRC-1992*

Intergranular corrosion test

Brand Name	After bending	Result
KFW-308L	No crack	OK

**Intergranular corrosion test is carried out by ASTM A262E*

Available Sizes and Suggested Operating Range

Welding Position	Wire Diameter 0.9mm	1.2mm	1.6mm
F&HF	70-170	100-250	200-350
Vertical Up	80-150	100-180	-

This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of Kuang Tai Metal IND CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.