

K-81TM

For 560MPa high tensile steel

Classifications

EN ISO 17632-A:2008	: T50 4 1Ni P M 1 H5
EN ISO 17632-B:2008	: T55 4 T1-1MA-N2 H5
JIS Z 3313	: T57 4 T1-1MA-N2-U H5
AWS A5.29-10	: E81T1-Ni1M
AWS A5.36-12	: E81T1/T9-M21A4-Ni1-H4
KS D 7104	: YFW-A604R

Approvals – M21 (Ar 80% + CO₂ 20%)

ABS	: 4YSAH5
BV	: 4YSH5
DNV	: IV YMS(H5)
LR	: 4YSH5

Description

- It is designed for welding of 560MPa high tensile steel with outstanding mechanical properties
- Typical applications include machineries, shipbuilding, offshore structures, bridges and general fabrications
- Wire is a titania type of flux cored wire for all-position welding with 1.0% Ni
- It provides good wet-in capabilities along with high impact values at low temperature (-40 °C)

Welding positions



Polarity & shielding gas

- DCEP (DC+)
- Mix: Ar + 20% CO₂ (15 – 25 l/min)

Typical chemical composition of all-weld metal (%)

Shielding Gas	C	Si	Mn	P	S	Ni
Mix	0.03	0.35	1.17	0.013	0.010	0.92

Typical mechanical properties of all-weld metal

	Yield Strength	Tensile Strength	Elongation	Impact Value (J)		Remarks
	(MPa)	(MPa)	(%)	-30 °C	-40 °C	
AWS A5.29	Min. 470	550-690	Min. 19	≥ 27		
EN ISO 17632-B	Min. 460	550-740	Min. 17		≥ 27	
Example	590	650	28	120	100	Mix

Notes on usage and welding condition

- For Mix gas, voltage should be lowered by 1-2 volts compared to when you weld with 100% CO₂
- Refer to KISWEL welding handbook page 219-221 for more information on usage

Package

Diameter (mm)	1.2, 1.4, 1.6
Spool (kg)	5, 12.5, 15, 20
Pailpack (kg)	100 - 300