

# SubCor M13K

AWS A5.17 EC1

## Characteristics and Applications:

SubCor M13K is a metal cored wire for submerged arc welding designed for welding 490N/mm<sup>2</sup> grade high tensile steel and low temperature steel, the application is similar to solid wire classification EM13K. It provides high deposition rates as compared to the solid wires of equal size, with the same amperage, electrical stick out and flux. Welded with SAW flux that provides smooth bead appearance, high porosity resistance and excellent low temperature impact toughness at -50°C. Typical applications include structure steel, bridges, tank fabrication, shipbuilding and offshore fabrication.

## Notes on usage:

1. To keep the toughness, the plates should not be welded with excessive heat input.
2. If the flux is affected by moisture pickup, it must be re dried at temperature between 300 and 350°C for 1 hour.
3. Keep the product dry, while it is stored or delivered.

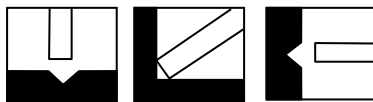
## Typical chemical composition of weld metal (wt%):

Flux		A5.17	C	Mn	Si	P	S
TF-565	AWS	EC1	≤ 0.15	≤ 1.80	≤ 0.90	≤ 0.035	≤ 0.035
	Typical value	EC1	0.05	1.60	0.27	0.025	0.008

## Typical mechanical properties of weld metal:

Flux		Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -50°C(-60°F)
TF-565	AWS A5.17 F7A6	≥ 400(58)	490-660(70-95)	≥ 22	≥ 27(20)
	Typical value	450(65)	515(75)	34	50(37)

## Welding position:



## Sizes and recommended parameter range (DC<+>)

Position	Diameter (mm)	2.4	3.2	4.0
	F、HF、H		300A-500A/25V-34V	300A-600A/26V-35V

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