

# ArcStar T12SR

AWS A5.20 E71T-1C-J / E71T-12C-J  
EN ISO 17632-A-T 42 4 P C1 1 H5

## Characteristics and Applications:

ArcStar T12SR is a gas-shielded flux cored wire designed for mild steel and 490N/mm<sup>2</sup> high tensile steel. It is suitable for all position welding. It provides stable arc, less spatter, easy slag removable, excellent X-Ray inspection, low diffusible hydrogen (less than 5 ml/100g) and excellent mechanical properties at lower temperatures in both the as welded and post weld heat treat conditions. The typical applications include shipbuilding, offshore, storage tank, pressure vessels, piping etc.

## Notes on Usage:

1. Use DC(+) polarity.
2. Use CO<sub>2</sub> as shielding gas.
3. Maintain interpass temperature under 150°C in multi-pass welding to keep excellent mechanical properties.

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

	C	Mn	Si	P	S	Ni
AWS	≤ 0.12	≤ 1.60	≤ 0.90	≤ 0.03	≤ 0.03	≤ 0.50
EN ISO	-	≤ 2.0	-	-	-	≤ 0.5
Typical value	0.05	1.25	0.31	0.014	0.008	0.42

## Typical mechanical properties of weld metal :

	Yield Strength MPa(ksi)	Tensile Strength MPa(ksi)	Elongation %	Charpy V-Notch J(ft-lbs)	PWHT
AWS	≥ 390(58)	490-620(70-90)	≥ 22	-40°C(-40°F) ≥ 27(20)	-
EN ISO	≥ 420(61)	500-640(73-93)	≥ 20	-40°C(-40°F) ≥ 47(35)	-
Typical value	485(70)	550(80)	29	-40°C(-40°F) 165(122)	-
	440(64)	520(75)	32	-40°C(-40°F) 145(107)	610°C×13hrs

## Welding position



## Sizes and recommended operating range ( DC<+>):

Stick out : 15-25 (mm), gas flow rate : 20-25 (l/min)

Position	Diameter (mm)	
		φ1.2mm
F, HF		160A~280A, 24V~33V
VU, OH		150A~220A, 24V~28V
VD		230A~280A, 28V~33V
H		200A~260A, 26V~30V

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