

SM-307Si

2019.11



❖ Specification

EN

ISO 14343-A G 18 8 Mn

❖ Applications

- ① Used for welding of austenite type STS 304 and high Mn steels.
- ② Used for joining dissimilar combinations of STS steels and carbon steels.

❖ Characteristics on Usage

Though SM-307Si is a austenite type stainless wire, the weld metal contains ferrite and resistance to crack is extremely good. The usability, such as arc stability and assimilability of welds to base metal is extremely good.

❖ Note on Usage

Use 100% Ar or Ar + 2%O₂ gas.

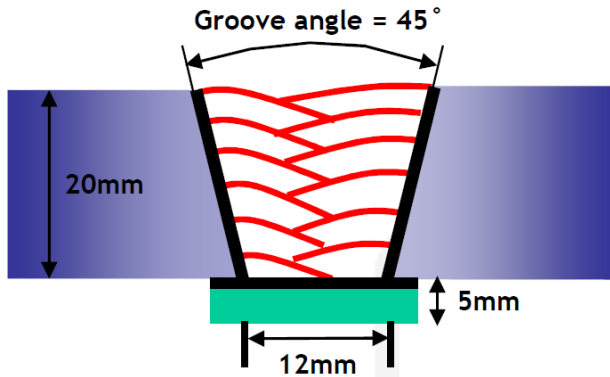
❖ Packing

Dia.	1.2mm (0.045in)	1.6mm (0.063in)
Spool	12.5kg (28lbs)	



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm
Shielding Gas	: Ar + 2%O ₂
Flow Rate(ℓ /min.)	: 15~20
Amp./ Volt.	: 230/27
Stick-Out(mm)	: 20
Pre-Heat(°C)	: R.T.
Interpass Temp.(°C)	: 150 ± 15
Polarity	: DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	T.S. MPa (ksi)	EL. (%)	0°C (32°F)	-20°C (-4°F)
SM-307Si	629 (91.2)	42.4	118.6 (87.5)	113.7 (83.9)

❖ Chemical Analysis of All weld metal

Consumable	Chemical Composition (%)								
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
SM-307Si	0.077	0.87	5.88	0.007	0.009	8.78	18.58	0.054	0.138



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Chemical Analysis of the wire(wt%)

Consumable	Chemical Composition (%)								
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
SM-307Si	0.073	0.97	6.25	0.021	0.001	8.21	18.79	0.143	0.180
EN ISO 14343- A G 18 8 Mn	≤0.20	≤1.2	5.0~ 8.0	≤0.03	≤0.03	7.0~ 10.0	17.0~ 20.0	≤0.30	≤0.30