

# ER 307Si

Stainless Steel WIRE/GMAW

## Standards

EN/ISO-Standard - 14343-A  
EN/ISO-Classification - G 18 8 Mn

AWS-Standard - A5.9  
AWS-Classification - ER 307Si

## Features and Applications

- Austenitic stainless steel wire with a significant amount of manganese, making the all weld metal in most cases fully austenitic.
- High mechanical strength and excellent crack resistance.
- Increased silicon content promotes weld pool fluidity to give a smooth deposit appearance.
- Ideal for dissimilar welding between steel and stainless steel, armour plate and exhaust systems etc.
- Suitable for depositing stress relaxing buffer layers on crack sensitive base metals including hardfacing.
- Precision layer wound for superior wire feeding characteristics.
- Typically used on applications subject to atmospheric and corrosive media's.
- **Test Certificates can be found online @wilkinsonstar247.com**



## Typical Base Materials

Armour plate, exhaust systems (type 409, 304), high Manganese austenitic steel, difficult to weld steels such as 42CrMo4, C45, 42MnV7, tool steels, 1.3401, X120Mn12 etc.\*

\* Illustrative, not exhaustive list

## Welding Positions

EN ISO 6947 - PA, PB, PC, PD, PE, PF

## Shielding Gases

EN ISO 14175 - M12, M13

## Polarity

DC (+)

## Mechanical Properties

Tensile Strength (N/mm <sup>2</sup> )	Yield Strength (N/mm <sup>2</sup> )	Elongation (%)	Impact Strength (J)
≥500	≥350	≥25	≥50

Mechanical properties are approximate and may vary based on the heat, shielding gas, welding parameters and other factors.

## Welding Parameters - M12

Ø mm	0.80	1.00	1.20
Current (A)	40-120	80-160	100-210
Voltage (V)	15-20	16-22	17-23

## Welding Parameters - M13

Ø mm	0.80	1.00	1.20
Current (A)	160-210	180-280	200-300
Voltage (V)	24-28	25-30	26-32

## Chemical Composition % (Typical)

C %	Mn %	Si %	S %	P %	Ni %	Cr %	Mo %	Cu %
0.045	6.06	0.82	0.005	0.029	8.02	18.35	0.05	0.030

## Packaging Data

Part No.	Diameter Ø (mm)	Package Weight (Kg)	Package Type	Pallet Quantity
6011100215	0.80	15	D300 PLW	72
6011100217	1.00	15	D300 PLW	72
6011100219	1.20	15	D300 PLW	72

**Liability:** Whilst all reasonable efforts have been made to ensure the accuracy of the information contained, this information is subject to change without notice and can be only considered as suitable for general guidance.

