

Joining difficult to weld steel - highest toughness**CLASSIFICATION**

EN ISO 14343-A (G 18 8 Mn)
AWS A5.9 (ER307Si)

GENERAL DESCRIPTION

Joining highly alloyed and difficult to weld steel.
Very tough, wear resistant refacings, resistant against heavy shocks, corrosion and rust.
Work hardens under impact load.
Crack resistant base layer for hard facings.
Oxidation resistant up to 850°C (1560°F).

TYPICAL USE

Welding armour steel, wear resistant chromium steels (3CR12 for example), manganese steel (12% Mn), joining stainless steel to carbon steel.
Refacing rails, frogs, clutches, crane wheels.
Universal welding wire for maintenance and repair.

CHEMICAL COMPOSITION (%) (Typical values, all weld metal)

C	Si	Mn	Cr	Ni	Mo & Cu	S & P
< 0.20	< 1.50	5.00 - 8.00	17.00 - 20.00	7.00 - 10.00	< 0.30	< 0.03

MECHANICAL PROPERTIES (Typical values, all weld metal)

Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation 5d (%)	Impact Strength Charpy V notch (ISO-V)
≥ 350 MPa	> 500 MPa	≥ 25%	≥ 50 J (R.T.)

General information

- Welding positions:** All
- Shielding gas:** Ar/CO₂ (M12: EN ISO 14175) or Ar/O₂ (M13: EN ISO 14175)
- Dia (x length) (mm):** 0.8 - 1.6
- Packing:** 15 kg spool (in a cardboard box)
- Polarity:** DC+
- Tips & tricks:** Joining difficult to weld steel: in function of the chemical analysis and the work piece thickness, preheating or cooling down slowly can be necessary.
Manganese steel (12%) is welded without preheat (max. 350° (660°F) interpass temperature).

The information in this document is based on intensive tests and is accurate to the best of our knowledge. Do note that these values are only typical values for tests in accordance to prescribed standards. The suitability of the product should always be confirmed by qualification tests before use in any application. The information can be changed without previous notice.