

MIG/MAG solid wires-TIG rods Stainless and Heat resistant steels

INERTFIL 318 is a G 19 12 3 Nb/ER318 type solid MAG welding wire supplied precision layer wound, depositing a niobium stabilised C-19Cr12Ni2.5Mo weld metal. Suitable for use with Ar+2%O₂ or Ar+0.5...5%CO₂ mixed shielding gases.

INERTFIL 318 is used for the welding of 316Ti and 316Nb stainless steels. It is used for a range of applications including the fabrication of pipe, plate and vessel.

The weld metal provides good resistance to crevice corrosion by oxidising acids.

| Classification | | Approvals | Grade |
|----------------|-----------------------|-----------|-------|
| EN ISO | 14343-A: G 19 12 3 Nb | DB | ● |
| AWS | A5.9: ER 318 | TÜV | ● |

Chemical analysis (Typical values in %)

| | C | Mn | Si | P | S | Cr | Ni | Mo | Nb |
|------|------|------|-----|--------|--------|----|----|-----|-----|
| Wire | 0.05 | 1.75 | 0.4 | ≤0.025 | ≤0.020 | 19 | 12 | 2.6 | 0.6 |

All-weld metal Mechanical Properties

| Heat Treatment | Yield Strength (MPa) | Tensile Strength (MPa) | Elongation A5 (%) | Impact Energy ISO - V (J) | |
|----------------|----------------------|------------------------|-------------------|---------------------------|---------|
| | | | | +20 °C | -110 °C |
| As Welded | ≥400 | ≥550 | ≥30 | ≥65 | ≥32 |

Gas test: M13

Shielding Gas - EN ISO 14175 : Ar+0.5%≤O₂≤3%, Ar+0.5≤CO₂≤5

Materials

1.4571 (X6CrNiMoTi17-12-2) - 1.4401 (X4CrNiMo17-12-2)
 1.4581 (GX5CrNiMoNb19-10) - 1.4436 (X4CrNiMo17-13-3)
 1.4580 (X6CrNiMoNb17-12-2) - 1.4408 (GX5CrNiMo19-11)
 1.4583 (X10CrNiMoNb18-12)

Storage

Keep dry and avoid condensation.

Current condition and welding position

DC+



Packaging data

| Packaging Type | BS300 |
|-----------------------|-------|
| Diam(mm) / weight(kg) | 15 |
| 0.8 | ● |
| 1.0 | ● |
| 1.2 | ● |