CARBOFIL 1A



MIG/MAG solid wires-TIG rods Mild and low-alloy steels

CARBOFIL 1A is a copper coated G4Si1/ER70S-6 type solid MAG welding wire, depositing C-1.3%Mn weld metal, for welding a wide range of mild and C-Mn structural steels. Suitable for welding with CO2 and Ar-based mixed shielding gases.

CARBOFIL 1A is a general application welding wire electrode used for both single- and multipass welding. Weld metal impact toughness properties are down to -40°C.

CARBOFIL 1A is available with a wide range of packaging formats, from spools for small MIG/MAG welding equipments to high-quantity bulk packagings for robotic application. The increased level of Manganese and Silicon scavenge oxides enhancing weld pool fluidity and stabilizing the arc, minimizing weld metal spatter and resulting in a higher strength weld metal. Excellent weld bead appearance with an even contour finish and freedom from undercut.

Solid coppered wire to use with CO2 or Ar/CO2 Mix shielding. Suitable for metal structures, earthmoving machinery.

| Classification | | | | |
|----------------|--------------------------|--|--|--|
| EN ISO | 14341-A: G 46 3 C1 4Si1 | | | |
| EN ISO | 14341-A: G 46 4 M21 4Si1 | | | |
| AWS | A5.18: ER 70S-6 | | | |

| Approvals | Grade | | |
|-----------|-----------|--|--|
| ABS | 2YSA | | |
| ABS | 3YSA | | |
| DB | • | | |
| DNV/GL | IV Y40MS | | |
| LR | 2YS H15 | | |
| LR | 4Y40S H15 | | |
| TÜV | • | | |



Chemical analysis (Typical values in %)

| | | • | | | |
|---------------------|------|-----|-----|---------|---------|
| | C | Mn | Si | P | S |
| Wire | 0.07 | 1.7 | 0.9 | ≤ 0.025 | ≤ 0.025 |
| All weld metal (*) | 0.08 | 1.3 | 0.7 | ≤0.025 | ≤0.025 |
| All weld metal (**) | 0.08 | 1.2 | 0.6 | ≤0.025 | ≤0.025 |

^{(*) 82%} Ar+18% CO2, (**) 100% CO2

All-weld metal Mechanical Properties

| Heat Treatment | Yield Strength Tensile Strength | | Elongation | Impact | Impact Energy ISO - V (J) | | |
|----------------|---------------------------------|---------|------------|--------|---------------------------|--------|--|
| neat neathlent | (MPa) | (MPa) | A5 (%) | +20 °C | -30 °C | -40 °C | |
| As Welded (*) | ≥460 | 530-680 | ≥24 | ≥100 | ≥80 | ≥70 | |
| As Welded (**) | ≥460 | 530-680 | ≥24 | ≥80 | ≥47 | | |

Gas test: (*) 82% Ar+18% CO2, (**) 100% CO2

Shielding Gas - EN ISO 14175 : C1, M14, M2, M3

Materials

S(P)235 - S(P)460; GP240; GP280

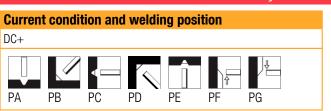
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Storage

Keep dry and avoid condensation



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