

STARINOX 312

MMA Electrodes

Stainless and Heat resistant steels

SAF-FRO

STARINOX 312 is a rutile coated MMA electrode for joining difficult-to-weld steels, dissimilar steels and for wear-resistant surfacing and buffer layers.

Applications include repair and maintenance welding on machines, power transmission equipment and tools. The microstructure of the higher strength weld metal consists of ferritic-austenitic Cr-Ni steel, with ~30% delta-ferrite, and is highly crack resistant, rust-proof and non-scaling <1100°C.

Very good weldability, weld metal transfer is in fine droplets with easy slag removal, producing a good weld bead shape.

| Classification | |
|----------------|-------------------------|
| EN ISO | 3581-A: E Z (29 9) R 12 |
| AWS | A5.4:~E 312-16 |

| Approvals |
|-----------|
| DB |
| ● |

CE

Chemical analysis (Typical values in %)

| | C | Mn | Si | Cr | Ni | Ferrite |
|----------------|------|----|-----|----|----|---------|
| All weld metal | 0.08 | 1 | 1.2 | 28 | 12 | 25-50 |

All-weld metal Mechanical Properties

| Heat Treatment | Yield Strength (N/mm ²) | Tensile Strength (N/mm ²) | Elongation A5 (%) | Impact Energy ISO - V (J) | | Hardness |
|----------------|-------------------------------------|---------------------------------------|-------------------|---------------------------|--|----------|
| | | | | +20 °C | | |
| As Welded | ≥ 450 | ≥ 650 | ≥ 20 | ≥ 30 | | 220 HB |

| Storage |
|--|
| Keep dry and avoid condensation. |
| Re-drying not generally required |
| If necessary: 250-300°C for 1 hour, 5 times max. |

| Current condition and welding position |
|--|
| AC; DC+ |
| PA PB PC PD PE PF |

Packaging data

| Diam. (mm) | Length (mm) | Current (A) | Approx. weightn(kg/1000) | SMPA | | VPMD | |
|------------|-------------|-------------|--------------------------|------|------------|------|------------|
| | | | | PC | Code | PC | Code |
| 2.5 | 300 | 55-75 | 18.3 | 28 | W000288921 | 95 | W000258738 |
| 3.2 | 350 | 75-115 | 36.37 | 15 | W000288922 | 55 | W000258739 |
| 4.0 | 350 | 90-140 | 54.1 | | | 35 | W000258740 |