# SUPRANOX RS 312

MMA Electrodes
Stainless and Heat resistant steels

SUPRANOX RS 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 | Grade |
|---|---|
| DB | ● |

CE

## Chemical analysis (Typical values in %)

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

## All-weld metal Mechanical Properties

| Heat Treatment | Yield Strength (MPa) | Tensile Strength (MPa) | Elongation A5 (%) | Impact Energy ISO - V (J) +20 °C | Hardness |
|---|---|---|---|---|---|
| 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+


## Packaging data

| Diam. (mm) | Length (mm) | Current (A) | Approx. weightn(kg/1000) | SMPA | | VPMD | |
|---|---|---|---|---|---|---|---|
| | | | | PC | Code | PC | Code |
| 2.5 | 300 | 55-75 | 18.30 | 28 | W000258455 | 95 | W000287909 |
| 3.2 | 350 | 75-115 | 36.37 | 15 | W000258456 | 55 | W000287910 |
| 4.0 | 350 | 90-140 | 54.10 | | | 35 | W000258457 |