

**Classifications**

high-alloyed

EN ISO 14343-A:

AWS A5.9:

S 25 9 4 N L

ER2594

**Characteristics and field of use**

Avesta 2507/P100Cu/W is intended for welding super duplex alloys such as 2507, ASTM S32760, S32550 and S31260. It can also be used for welding duplex type 2205 if extra high corrosion resistance is required, e.g. in root runs in tubes. The weldability of duplex and super duplex steels is excellent but the welding should be adapted to the base material, considering fluidity, joint design, heat input etc. Very good resistance to pitting and stress corrosion cracking in chloride containing environments. PREW>46. Meets the corrosion test requirements per ASTM G48 Methods A, B and E (40°C).

**Base materials**

For welding steels such as

| Outokumpu | EN     | ASTM   | BS | NF              | SS   |
|-----------|--------|--------|----|-----------------|------|
| 2507      | 1.4410 | S32750 | -  | Z3 CDN 25-06 Az | 2328 |

**Typical analysis of the wire (Wt-%)**

| C    | Si   | Mn  | Cr   | Ni  | Mo  | N    |
|------|------|-----|------|-----|-----|------|
| 0.02 | 0.35 | 0.4 | 25.0 | 9.5 | 4.0 | 0.25 |

Ferrite 50 FN; WRC-92

**Available flux**

805

**Mechanical properties of all-weld metal**

| Heat Treatment | Yield strength<br>0.2% | Tensile strength | Elongation<br>( $L_0=5d_0$ ) | Impact values<br>in J CVN |        |  |
|----------------|------------------------|------------------|------------------------------|---------------------------|--------|--|
|                | MPa                    | MPa              | %                            | +20°C:                    | -46°C: |  |
| 805            | 600                    | 800              | 27                           | 80                        | 60     |  |

**Operating data**


Polarity = ±

**Dimensions (mm)**

|     |     |  |  |  |  |
|-----|-----|--|--|--|--|
| 2.4 | 3.2 |  |  |  |  |
|-----|-----|--|--|--|--|