

SUPER DUPLEX UNS S32760 ALLOY 1.4501 F55

Super Duplex UNS S32760 is among the most common super duplex grade in the market. UNS S32760 is a duplex stainless steel especially designed for service in aggressive chloride-containing environments and has additions of W and Cu compared to UNS S32750.

SUPER DUPLEX UNS S32760 / ALLOY 1.4501 / F55

Approvals: NACE MR0175, Norsok M630 - M650 MDS D57

Product Standards: EN 10088-3, ASTM A276, ASTM A479, ASTM A182-11A
(Chemical composition and mechanical properties only)

APPLICATIONS

The S32760 has very good resistance to localized corrosion and stress corrosion cracking in combination with high mechanical strength.

Heat Treatment

Solution annealing at 1100°C followed by water quenching.

Weldability

Very good.

It is widely used in oil & gas, hydropower, pressure vessels, pulp & paper, structural components and chemical tankers having high resistance to stress corrosion cracking in halide containing environments. High resistance to pitting and crevice corrosion. High resistance to general corrosion. High mechanical strength and resistance to erosion corrosion and corrosion fatigue.

CHEMICAL COMPOSITION

| Weight % | C | Si | Mn | S | P | Cr | Ni | Mo | N | Cu | W |
|----------|-------|------|------|-------|-------|-------|------|------|------|------|------|
| Min. | | | | | | 24,00 | 6,00 | 3,00 | 0,20 | 0,50 | 0,50 |
| Max. | 0,030 | 1,00 | 1,00 | 0,010 | 0,030 | 26,00 | 8,00 | 4,00 | 0,30 | 1,00 | 1,00 |

MECHANICAL PROPERTIES

| | Yield strength Rp0.2, MPa | Tensile strength Rm, MPa | Elongation [%] | Hardness [HB] | Impact, Charpy-V, -46°C [J] | Pre |
|-----|------------------------------|-----------------------------|-------------------|------------------|--------------------------------|------|
| BAR | ≥ 550 | ≥ 750 | ≥ 25 | ≤ 310 | ≥ 45 | ≥ 40 |

ROUND BAR (STOCK)

| | | | | |
|----------|----------|--------|----------|----------|
| 12,7 mm | 50,8 mm | 120 mm | 180 mm | 300 mm |
| 15,87 mm | 60 mm | 127 mm | 203,2 mm | 304,8 mm |
| 19,05 mm | 70 mm | 130 mm | 220 mm | 330 mm |
| 25,4 mm | 76,2 mm | 140 mm | 230 mm | 355,6 mm |
| 31,75 mm | 80 mm | 152 mm | 240 mm | 380 mm |
| 38,1 mm | 90 mm | 160 mm | 254 mm | 406,4 mm |
| 44,5 mm | 101,6 mm | 170 mm | 280 mm | |