Duplex and Super Duplex Stainless Steel 2205 / 2507

Designations: 2205: UNS S32205 / S31803 / 1.4462 | 2507: UNS S32750 / 1.4410

Applicable standards: ASTM A240, A790, A276, A182

Product Description

Ochnology is a manufacturer and supplier of duplex stainless steel 2205 (UNS S31803 / S32205, 1.4462) and super duplex 2507 (UNS S32750, 1.4410) in plate, pipe and bar. Duplex 2205 has about 22% Cr, 5% Ni and 3% Mo, with a minimum yield of about 450 MPa and a PREN of 35 or more. Super duplex 2507 has PREN of 40 or more and about 550 MPa yield. Used for chemical plants, desalination, offshore oil and gas and seawater piping.

Chemical Composition (% by weight)

Element	2205 (UNS S32205)	2507 (UNS S32750)
Carbon (C)	≤ 0.030	≤ 0.030
Manganese (Mn)	≤ 2.00	≤ 1.20
Silicon (Si)	≤ 1.00	≤ 0.80
Phosphorus (P)	≤ 0.030	≤ 0.035
Sulphur (S)	≤ 0.020	≤ 0.020
Chromium (Cr)	22.0–23.0	24.0–26.0
Nickel (Ni)	4.5–6.5	6.0–8.0
Molybdenum (Mo)	3.0–3.5	3.0–5.0
Nitrogen (N)	0.14–0.20	0.24–0.32
Copper (Cu)	—	≤ 0.50

Mechanical and Physical Properties

Property	2205 (UNS S32205)	2507 (UNS S32750)
Yield strength (0.2%), min	450 MPa	550 MPa
Tensile strength, min	655 MPa	795 MPa
Elongation, min	25 %	15 %
Hardness, max	293 HBW	310 HBW
PREN (typical)	≥ 35	≥ 40

Supply Details

Item	Detail
Density	7.80 g/cm³
Forms	Plate, sheet, seamless and welded pipe, bar
Delivery condition	Solution annealed and quenched
Certification	Mill test certificate (EN 10204 3.1) and third-party inspection available on request

Typical Applications

- Chemical processing plants
- Desalination plants
- Offshore oil and gas piping
- Seawater and heat-exchanger systems

Ordering Information

To request a quotation, send the grade and standard, form, size or thickness, quantity, delivery condition, destination port and required certificates to info@ochnology.com or bd@ochnology.com. Typical values apply to the stated standards; actual values are certified on the mill test certificate for each lot.

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