

1.4462 (Duplex)

Duplex steel · Material no. 1.4462

1.4462 is a duplex steel (austenitic-ferritic) with high strength and excellent resistance to pitting and stress-corrosion cracking – ideal for seawater and aggressive chemicals.

1.4462 MATERIAL NO.	≥ 460 MPa YIELD STRENGTH Rp0.2	640–840 MPa TENSILE STRENGTH Rm	~ -50 to 250 °C SERVICE TEMP.
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Application

- Seawater and offshore applications
- Chemicals with high chloride load
- Highly loaded piping and vessels

Chemical composition (typical, wt.-%, per EN)

Element	Content (%)
C	≤ 0.030
Si	≤ 1.00
Mn	≤ 2.00
Cr	21.0–23.0
Ni	4.5–6.5
Mo	2.5–3.5
N	0.10–0.22

Mechanical properties (typical at RT, per EN)

Property	Value
Yield strength Rp0.2	≥ 460 MPa
Tensile strength Rm	640–840 MPa
Elongation A	≥ 25 %

Standards & supply

Topic	Detail
Standards	EN 10216-5, EN 10088

Topic	Detail
ASME/ASTM equivalent	~ UNS S31803 / S32205
Short name / aka	X2CrNiMoN22-5-3 · Duplex
Product forms	Pipes, flanges, fittings – seamless/welded, EN 10204 3.1/3.2 mill certificate

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All data are typical values per the relevant EN standards for first orientation – without warranty. The applicable standard and the mill certificate of the delivery are decisive.