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Material data sheet
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Alloy 825

Nickel-base alloy · Material no. 2.4858

Alloy 825 is a copper- and titanium-bearing nickel-iron-chromium alloy with high resistance to sulphuric and phosphoric acid and to stress-corrosion cracking.

2.4858	≥ 235 MPa	≥ 579 MPa	highly corrosion-resistant
MATERIAL NO.	YIELD STRENGTH RP0.2	TENSILE STRENGTH RM	SERVICE TEMP.

Application

- Sulphuric and phosphoric acid plants
- Pickling and process plants
- Chemicals with reducing and oxidising media

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

Element	Content (%)
Ni	38.0–46.0
Cr	19.5–23.5
Mo	2.5–3.5
Cu	1.5–3.0
Ti	0.6–1.2
Fe	Rest

Mechanical properties (typical at RT, per EN)

Property	Value
Yield strength Rp0.2	≥ 235 MPa
Tensile strength Rm	≥ 579 MPa
Elongation A	≥ 30 %

Standards & supply

Topic	Detail
Standards	ASTM B423 / B424, VdTÜV

Topic	Detail
ASME/ASTM equivalent	~ UNS N08825
Short name / aka	NiCr21Mo · Incoloy 825 · UNS N08825
Product forms	Pipes, flanges, fittings – seamless/welded, EN 10204 3.1/3.2 mill certificate

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