

MATERIAL DATA SHEET · NICKEL ALLOYS

Alloy 625 (UNS N06625) — Chemical Composition & Mechanical Properties

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Alloy 625 (UNS N06625) is a nickel alloys grade for nickel alloy forgings, fittings & pipe (UNS N06625, EN / W.Nr 2.4856). It is also known as Inconel 625 (trade name). This sheet summarises its chemical composition limits, minimum mechanical properties, heat treatment and typical service. Teshi Group manufactures flanges and fittings in this grade.

At a glance

Material family	Nickel alloys
Product form	Nickel alloy forgings, fittings & pipe
UNS	N06625
EN / W.Nr	2.4856
Also known as	Inconel 625 (trade name)
PREN (min values)	46.4

Mechanical properties

Tensile strength, min	827 MPa
Yield strength (0.2 % offset), min	414 MPa
Elongation, min	30 %
Hardness	Not specified

Chemical composition (weight %)

Ni 58.0 min	Cr 20.0–23.0	Mo 8.0–10.0	Nb+Ta 3.15–4.15	Fe 5.0 max
C 0.10 max	Mn 0.50 max	Si 0.50 max	P 0.015 max	S 0.015 max
Al 0.40 max	Ti 0.40 max	Co 1.0 max		

Single values are maximums unless shown as a range or "min".

Heat treatment

Annealed 870 °C min (grade 1)

Typical service

Seawater, flue gas, sour gas, chloride and acid service

International equivalents (nearest)

USA — specification	Alloy 625 (UNS N06625)
USA — UNS	N06625
Europe — EN designation	NiCr22Mo9Nb
Europe — W.Nr	2.4856
Japan — JIS	NCF625
China — GB / NB	NS3306 (GB/T 15007) / GH3625
China — old GB designation	0Cr20Ni65Mo10Nb4
UK — BS (withdrawn)	NA21

Same alloy in other product forms

Flanges & forged fittings	ASTM B564 N06625
Butt-weld fittings	ASTM B366 WPNCMC
Seamless pipe	ASTM B444 N06625
Welded pipe	ASTM B705 N06625
Plate	ASTM B443 N06625
Bar	ASTM B446 N06625

Teshi Group — OEM manufacturer of flanges, pipe fittings, fasteners, valves and fabrications; stockist and supplier of pipes, plates and structural steel. ISO 9001:2015 · IBR approved · since 1971. Enquiries: info@teshigroup.com · sales@teshigroup.com · +91 78900 09110

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