

MATERIAL DATA SHEET · AUSTENITIC STAINLESS STEEL

ASTM A182 F316Ti — Chemical Composition & Mechanical Properties

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ASTM A182 F316Ti is a austenitic stainless steel grade for forged flanges & fittings (UNS S31635, EN / W.Nr 1.4571). 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	Austenitic stainless steel
Product form	Forged flanges & fittings
UNS	S31635
EN / W.Nr	1.4571
Also known as	316Ti
PREN (min values)	22.6

Mechanical properties

Tensile strength, min	515 MPa
Yield strength (0.2 % offset), min	205 MPa
Elongation, min	30 %
Hardness	Not specified

Chemical composition (weight %)

C 0.08 max	Mn 2.00 max	P 0.045 max	S 0.030 max	Si 1.00 max
Cr 16.0–18.0	Ni 10.0–14.0	Mo 2.00–3.00	N 0.10 max	Ti 5×(C+N) min, 0.70 max

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

Heat treatment

Solution annealed 1040 °C min, rapid cool

Typical service

Titanium-stabilised 316 for welded equipment exposed to sensitising temperatures

International equivalents (nearest)

USA — ASTM / ASME	ASTM A182 F316Ti · ASME SA-182 F316Ti
USA — UNS	S31635
Europe — EN designation	X6CrNiMoTi17-12-2
Europe — W.Nr	1.4571
Japan — JIS	SUS316Ti
China — GB / NB	S31668 (06Cr17Ni12Mo2Ti)
China — old GB designation	0Cr18Ni12Mo3Ti
India — IS	X04Cr17Ni12Mo2Ti (IS 6911)
UK — BS (withdrawn)	320S31

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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