MATERIAL DATA SHEET · FORGED FLANGES & FITTINGS

ASTM A182 F22 Cl.3

Chemical composition and mechanical properties

ASTM A182 F22 Cl.3 is an ASTM specification for forged flanges & fittings (UNS K21590). This sheet summarises its chemical composition limits and minimum mechanical properties. Typical use: 2¼Cr-1Mo steam / hydrogen high-temperature service.

Chemical composition (weight %)

C	Mn	P max	S max	Si	Cr	Ni	Mo
0.05–0.15	0.30–0.60	0.040	0.040	0.50 max	2.00–2.50	—	0.87–1.13

Mechanical properties

Tensile strength, min	515 MPa
Yield strength, min	310 MPa
Elongation, min	20 %
Hardness	156–207 HBW

Heat treatment

Annealed or normalized & tempered (temper 675 °C min)

Typical service

2¼Cr-1Mo steam / hydrogen high-temperature service

Supplied by Teshi Group in this grade

Industrial Flanges (OEM manufacturer); Socket Weld Fittings (OEM manufacturer)

Composition limits are maxima unless a range is shown. Properties are specification minima for the standard product form and may vary with section size and edition of the specification.

> Reference information compiled from the published standard for convenience. It does not replace the current edition of the governing standard, which takes precedence. Verify critical dimensions and properties before design, purchase or fabrication. Teshi Engineers & Sales Promoters (P) Ltd accepts no liability for errors or omissions.

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