



ASM Aerospace Specification Metals Inc.



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AISI Type S15500 (15Cr-5Ni) Precipitation Hardening Stainless Steel tested at 315°C (600°F), condition H1025

Subcategory: Ferrous Metal; Metal; Precipitation Hardening Stainless; Stainless Steel; T S10000 Series Stainless Steel

Key Words: 15-5 PH, 15-5PH, 15/5 PH, 15/5PH, XM12, AMS 5862, ASME SA705 (XM-12), ASTM A564 (XM-12), ASTM A693 (XM-12), ASTM A705 (XM-12), AFNOR NF A35-581 Z6CNU15.05, DIN 1.4540, DIN X4CrNiCuNb164, Cr-Ni 15-5, UNS S15500, AMS 5658, AMS 5659, AMS 5826

Component	Wt. %	Component	Wt. %	Component	Wt. %
C	Max 0.07	Mn	Max 1	P	Max 0.04
Cr	14.8	Nb + Ta	0.3	S	Max 0.03
Cu	3.5	Ni	4.5	Si	Max 1
Fe	75				

Material Notes:

Martensitic, precipitative hardening (maraging), combining high strength and hardness with excellent corrosion resistance. Applications include valve parts, fittings and fasteners, shafts, gears, chemical process equipment, paper mill equipment, aircraft components and nuclear reactor components.

Physical Properties	Metric	English	Comments
Density	<u>7.8 g/cc</u>	0.282 lb/in ³	

Mechanical Properties

Tensile Strength, Ultimate	<u>958 MPa</u>	139000 psi	
Tensile Strength, Yield	<u>903 MPa</u>	131000 psi	
Elongation at Break	<u>14 %</u>	14 %	gage length is 4 times diameter
Charpy Impact	<u>114 J</u>	84.1 ft-lb	at 24°C, 62 J at -12°C, 31 J at -40°C, 12 J at -73°C, 3 J at -195°C

Electrical Properties

References for this datasheet.

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error.