



TAMBOLI CASTINGS LIMITED

ISO 9001 : 2015, EN 9100D : 2018, IATF 16949 : 2016, ISO 14001 : 2015, ISO 45001 : 2018, PED & AD 2000 - Merkblatt W0, NORSOK M-650 & EN 15085-2 BY TUV-NORD, ECOVADIS



Material - ASTM A732 7Q

Standard Specification for Castings, Investment, Carbon and Low Alloy Steel for General Application, and Cobalt Alloy for High Strength at Elevated Temperatures

MATERIAL DATASHEET

GROUP

Ferrous Mild Steel Alloys

SUB GROUP

ASTM A732 / A732M

INDUSTRY

Investment Casting

ASTM A732 Grade 8Q is a high-strength chromium-molybdenum alloy investment cast steel developed for components subjected to heavy mechanical loads and abrasive service conditions. Its quenched and tempered microstructure provides outstanding tensile strength, high yield strength, and excellent wear resistance while maintaining dimensional stability. This grade is extensively used for pressure-containing castings, valves, pumps, construction equipment, mining machinery, and industrial power transmission components where maximum strength and long service life are critical.



CHEMICAL COMPOSITION

ELEMENT	SYMBOL	COMPOSITION
Carbon	C %	0.250 – 0.350
Silicon	Si %	0.200 – 0.800
Manganese	Mn %	0.400 – 0.700
Phosphorus	P %	0.040 max.
Sulphur	S %	0.045 max.
Chromium	Cr %	0.800 – 1.100
Molybdenum	Mo %	0.150 – 0.250
Copper	Cu %	0.500 Max
Tungsten	W	0.10
Other Elements		0.600 Max
Iron	Fe %	Balance



MECHANICAL PROPERTIES

PERFORMANCE SPECIFICATIONS

Tensile Strength 1030
Minimum Value MPa

Yield Strength 793
Minimum Value MPa

Elongation 7
Minimum Value %



HEAT TREATMENT

Normalising/Harding & Tempering



INDUSTRY APPLICATIONS

Industrial valves



Pump casings



Petrochemical plants



Steam service



Piping



DISCLAIMER: All information in this datasheet is indicative only and is not intended to be a substitute for the full specification. It provides typical values for comparison between metal alloy options rather than a definitive statement of mechanical performance. Values may vary with temperature, product type, and application. This data does not constitute any guarantee of properties.

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