



TAMBOLI CASTINGS LIMITED

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



Material - ASTM A732 4A

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 4A is a medium-carbon investment cast steel grade designed for general engineering applications requiring a balance of strength, toughness, and machinability. Its carbon-rich composition provides improved wear resistance while maintaining good ductility after annealing, normalizing, or quench and temper heat treatment. This grade is widely used for valves, pumps, industrial machinery, automotive components, and heavy engineering applications where reliable mechanical performance and cost-effective manufacturing are essential.



CHEMICAL COMPOSITION

ELEMENT	SYMBOL	COMPOSITION
Carbon	C %	0.450 – 0.550
Silicon	Si %	0.200 – 1.000
Manganese	Mn %	0.700 – 1.000
Phosphorus	P %	0.040 Max
Sulphur	S %	0.045 Max
Copper	Cu %	0.500 Max
Tungsten	W%	0.100 Max
Other Elements		0.600 Max
Iron	Fe %	Balance



MECHANICAL PROPERTIES

PERFORMANCE SPECIFICATIONS

Tensile Strength **621**
Minimum Value MPa

Yield Strength **345**
Minimum Value MPa

Elongation **20**
Minimum Value %



HEAT TREATMENT

Annealing/Normalizing & 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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