



High Alloy Steel ASTM A487 Gr. CA6NM(A)

Standard Specification for Castings, martensite, for Pressure-Containing Parts

MATERIAL DATASHEET

GROUP
Ferrous Stainless Steel Alloys**SUB GROUP**
ASTM A487 / A87M**INDUSTRY**
Investment Casting

This martensitic stainless steel casting grade combines a carefully balanced chromium-nickel-molybdenum composition to deliver exceptional strength and toughness for high-pressure service applications. With tensile strength ranging from 760-930 MPa and a yield strength of 550 MPa minimum, it offers superior mechanical performance over standard austenitic grades while maintaining adequate corrosion resistance in mildly aggressive environments. The flexible heat treatment options of annealing, normalising, or hardening and tempering allow precise tailoring of mechanical properties, making it the preferred choice for heavy-duty valves, pumps, and pressure-containing components in power generation and hydraulic turbine industries.



CHEMICAL COMPOSITION

ELEMENT	SYMBOL	COMPOSITION
Carbon	C %	0.060 max.
Silicon	Si %	1.000 max.
Manganese	Mn %	1.000 max.
Phosphorus	P %	0.035 max.
Sulphur	S %	0.030 max.
Chromium	Cr %	11.500 - 14.000
Nickel	Ni %	3.500 - 4.500
Molybdenum	Mo %	0.400 - 1.000
Copper	Cu %	0.500 max.
Vanadium	V %	0.050 max.
Tungsten	W %	0.100 max.
Iron	Fe %	Balance

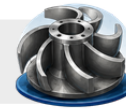


MECHANICAL PROPERTIES

PERFORMANCE SPECIFICATIONS

Tensile Strength 760 - 930
Minimum Value MPa**Yield Strength 550**
Minimum Value MPa**Elongation 15**
Minimum Value %**Reduction of Area 35**
Minimum Value % **HEAT TREATMENT**
Normalising & Tempering

INDUSTRY APPLICATIONS

High-strength turbine parts**Oilfield pumps****Severe cavitation zones****Hydropower equipment****Heavy-duty impellers**

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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