

Material: ASTM A1001 Grade 2

Standard Specification for High Strength Steel Castings in Heavy Sections

Group: Ferrous Mild Steel Alloys

Sub Group: ASTM A1001 High Strength Steel Castings in Heavy Sections

Application: Intended for Valve, Pump, General Engineering, Automotive and Other Industries Grade

Belongs to the Industry: Casting

Chemical Composition			Heat Treatment															
Carbon	C %	0.200 - 0.280	Normalising or Annealing or Hardening + Tempering															
Silicon	Si %	0.300 - 0.600																
Manganese	Mn %	1.000 - 1.400																
Phosphorus	P %	0.020 max.																
Sulphur	S %	0.015 max.																
Chromium	Cr %	0.800 - 1.200																
Nickel	Ni %	1.000 - 1.300																
Molybdenum	Mo %	0.600 - 0.850																
Aluminium	Al %	0.030 max.																
Other	%	0.600 max.																
Iron	Fe %	Balance	<table border="1"> <thead> <tr> <th colspan="2">Mechanical Properties</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength in Mpa</td> <td>655 min.</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>525 min.</td> </tr> <tr> <td>Elongation in %</td> <td>11 min.</td> </tr> <tr> <td>Reduction of Area in %</td> <td>-</td> </tr> <tr> <td>Hardness in BHN</td> <td>-</td> </tr> <tr> <td>Impact in Joule</td> <td>20 min. @ -40°C</td> </tr> </tbody> </table>		Mechanical Properties		Tensile Strength in Mpa	655 min.	Yield Strength in Mpa	525 min.	Elongation in %	11 min.	Reduction of Area in %	-	Hardness in BHN	-	Impact in Joule	20 min. @ -40°C
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A1001 Grade 3	ASTM	USA	Casting
A757 A1Q	ASTM	USA	Casting
J03002	UNS	USA	Casting
1.0619	DIN	Germany	Casting
1.0619	EN	European Union	Casting
A660 WCB	ASTM	USA	Fusion Welding, Bending and Forming
SA 660 WCB	ASME	USA	Centrifugal Casting

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