



**GRAVITY CAST PVT. LTD.**  
GRAVITY GROUP OF COMPANIES

## Material - UNS J22091

### Standard Specification for Alloy Steel Casting

Group - Ferrous Mild Steel Alloys

Sub Group - UNS J22091 Alloy Steel Casting

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 max.	Annealing or Normalising or Hardening + Tempering															
Silicon	Si %	0.800 max.																
Manganese	Mn %	0.500 - 0.900																
Phosphorus	P %	0.035 max.																
Sulphur	S %	0.035 max.																
Chromium	Cr %	2.000 - 2.750																
Vanadium	V %	0.030 max.																
Molybdenum	Mo %	0.900 - 1.100																
Copper	Cu %	0.500 max.																
Tungsten	W %	0.100 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>585 - 760</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>380 min.</td> </tr> <tr> <td>Elongation in %</td> <td>20 min.</td> </tr> <tr> <td>Reduction of Area in %</td> <td>35 min.</td> </tr> <tr> <td>Hardness in BHN</td> <td>-</td> </tr> <tr> <td>Impact in Joule</td> <td>-</td> </tr> </tbody> </table>		Mechanical Properties		Tensile Strength in Mpa	585 - 760	Yield Strength in Mpa	380 min.	Elongation in %	20 min.	Reduction of Area in %	35 min.	Hardness in BHN	-	Impact in Joule	-
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
SA-487 Class 8N	ASME	USA	Casting
SA-487 Grade 8A	ASME	USA	Casting
SA-487 Grade 8B	ASME	USA	Casting
SA-487 Grade 8C	ASME	USA	Casting
A487 8A	ASTM	USA	Casting
A487 8B	ASTM	USA	Casting
A487 8C	ASTM	USA	Casting

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

**ONE STOP SOLUTION FOR METAL PARTS**