

## Material: ASTM A757 Grade E1Q

### Standard Specification for Steel Castings, Ferritic and Martensitic, for Pressure-Containing and Other Applications, for Low-Temperature Service

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A757 / A757M Ferritic and Martensitic Steel Castings for Pressure-Containing and Low-Temperature Service

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

**Belongs to the Industry:** Casting

Chemical Composition			Heat Treatment															
Carbon	C %	0.220 max.	Normalising or Annealing or Hardening + Tempering															
Silicon	Si %	0.600 max.																
Manganese	Mn %	0.500 - 0.800																
Phosphorus	P %	0.025 max.																
Sulphur	S %	0.025 max.																
Chromium	Cr %	1.350 - 1.850																
Nickel	Ni %	2.500 - 3.500																
Molybdenum	Mo %	0.350 - 0.600																
Vanadium	V %	0.030 max.																
Copper	Cu %	0.500 max.																
Other	%	0.700 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>620 min.</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>450 min.</td> </tr> <tr> <td>Elongation in %</td> <td>22 min.</td> </tr> <tr> <td>Reduction of Area in %</td> <td>40 min.</td> </tr> <tr> <td>Hardness in BHN</td> <td>-</td> </tr> <tr> <td>Impact in Joule</td> <td>41 min. @ -73°C</td> </tr> </tbody> </table>		Mechanical Properties		Tensile Strength in Mpa	620 min.	Yield Strength in Mpa	450 min.	Elongation in %	22 min.	Reduction of Area in %	40 min.	Hardness in BHN	-
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J42220	UNS	USA	Casting
1.6783	EN	European Union	Casting
1.6783	DIN	Germany	Casting
G 19 NiCrMo 12 6	EN	European Union	Casting
G 19 NiCrMo 12 6	DIN	Germany	Casting
A757 Grade E2N1, E2Q1	ASTM	USA	Casting
A757 Grade E2N2, E2Q2	ASTM	USA	Casting

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