

# Material: MSZ C 3

## Standard Specification for Wheel Bodies for Rail Vehicles

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** MSZ C 3 Wheel Bodies for Rail Vehicles

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

**Grade Belongs to the Industry:** Steel

Chemical Composition		
Carbon	C %	0.520 max.
Silicon	Si %	0.500 max.
Manganese	Mn %	0.900 max.
Phosphorus	P %	0.040 max.
Sulphur	S %	0.040 max.
Chromium	Cr %	0.300 max.
Nickel	Ni %	0.300 max.
Molybdenum	Mo %	0.500 max.
Vanadium	V %	0.050 max.
Copper	Cu %	0.300 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Annealing or Normalizing or Hardening + Tempering

Mechanical Properties	
Tensile Strength in Mpa	621 min.
Yield Strength in Mpa	345 min.
Elongation in %	20 min.
Reduction of Area in %	-
Hardness in BHN	-
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1606.0000	SS	Sweden	Casting
50 CD 4-M	AFNOR NF	France	Casting
5152	SAE	USA	Steel
735 A 51	BS	British	Hot Formed Spring
1050	AISI	USA	Forging, Bar, Wire, and Shape
C48GW-N-A	JIS	Japan	Forging
A732 4A	ASTM	USA	Casting

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