## 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 |  |  | Heat Tr |  |
| :---: | :---: | :---: | :---: | :---: |
| Carbon | C \% | 0.520 max. | Annealing or Normalising or Hardening + Tempering |  |
| Silicon | Si \% | 0.500 max. |  |  |
| Manganese | Mn \% | 0.900 max. |  |  |
| Phosphorus | P \% | 0.040 max. |  |  |
| Sulphur | S \% | 0.040 max. |  |  |
| Chromium | $\mathrm{Cr} \%$ | 0.300 max. |  |  |
| Nickel | Ni \% | 0.300 max. |  |  |
| Molybdenum | Mo \% | 0.500 max. |  |  |
| Vanadium | V \% | 0.050 max. | Mechanical Properties |  |
| Copper | $\mathrm{Cu} \%$ | 0.300 max. | Tensile Strength in Mpa | 621 min . |
| Iron | Fe \% | Balance | 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 |  |

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. - Gravity Group of Companies team member Call on +918469160029 , or email marketing@gravitycastindia.com

