

Material: MSZ 1.4581

Standard Specification for Steel Castings for Pressure Purposes

Group: Ferrous Stainless Steel Alloys

Sub Group: MSZ 1.4581 Steel Castings for Pressure Purposes

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

Grade Belongs to the Industry: Casting

| Chemical Composition | | | Heat Treatment | |
|----------------------|-------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon | C % | 0.070 max. | Normalizing or Quenching or Solution Annealing | |
| Silicon | Si % | 1.500 max. | | |
| Manganese | Mn % | 1.500 max. | | |
| Phosphorus | P % | 0.040 max. | | |
| Sulphur | S % | 0.030 max. | | |
| Chromium | Cr % | 18.000 - 20.000 | | |
| Molybdenum | Mo % | 2.000 - 2.500 | | |
| Nickel | Ni % | 9.000 - 12.000 | | |
| Copper | Cu % | 0.500 max. | | |
| Nb + Ta | Nb % + Ta % | 1.000 max. | | |
| Iron | Fe % | Balance | Mechanical Properties Tensile Strength in Mpa 440 - 640 Yield Strength in Mpa 185 min. Elongation in % 25 min. Reduction of Area in % - Hardness in BHN - Impact in Joule 40 J @ RT | |
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| Cross Reference Table | | | |
|-----------------------|----------|---------------|------------------------------|
| Material | Standard | Country | Grade Belong to the Industry |
| GX5CrNiMo19-11-2 | BS | British | Plate, Tubes and Forging |
| 1.4581 | ISO | International | Casting |
| 1.4581 | UNI | Italy | Casting |
| 1.4581 | PN | Poland | Casting |
| 1.4581 | UNE | Spain | Casting |
| 1.4581 | SS | Sweden | Casting |
| 1.4581 | BDS | Bulgaria | Casting |

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