



## Material - DIN 1.0471

## Standard Specification for Seemless Steel Tubes for Pressure Purposes

**Group - Ferrous Mild Steel Alloys** 

Sub Group - DIN 1.0471 Seemless Steel Tubes for Pressure Purposes

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

**Grade Belongs to the Industry - Steel and Tube** 

| Chemical Composition |      |               | Heat Treatment                |           |
|----------------------|------|---------------|-------------------------------|-----------|
| Carbon               | C %  | 0.220 max.    |                               |           |
| Silicon              | Si % | 0.150 - 0.350 |                               |           |
| Manganese            | Mn % | 1.000 - 1.500 | Normalising Forming           |           |
| Phosphorus           | P %  | 0.025 max.    |                               |           |
| Sulphur              | S %  | 0.010 max.    |                               |           |
| Aluminium            | Al % | 0.060 max.    |                               |           |
| Copper               | Cu % | 0.300 max.    |                               |           |
| Niobium              | Nb % | 0.015 - 0.100 |                               |           |
| Iron                 | Fe % | Balance       | Mechanical Properties         |           |
| -                    | -    |               | Tensile Strength in Mpa       | 500 - 650 |
| -                    | -    | -             | Yield Strength in Mpa         | 335 min.  |
| -                    | -    | -             | Elongation in %               | 20 min.   |
| -                    | -    | -             | Reduction of Area in %        | -         |
| -                    | -    | -             | Hardness in BHN               | -         |
| -                    | -    | -             | Impac <mark>t in Joule</mark> | 27 J @ RT |

| Cross Reference Table |          |                |                                |  |
|-----------------------|----------|----------------|--------------------------------|--|
| Material              | Standard | Country        | Grade Belong to the Industry   |  |
| 1.0471                | EN       | European Union | Steel and Tube                 |  |
| 1.0471                | DIN      | Germany        | Steel and Tube                 |  |
| 1522                  | AISI     | USA            | Forging, Rolling, Bar and Tube |  |
| 150M19                | BS       | British        | Steel and Tube                 |  |
| G15220                | UNS      | USA            | Forging, Rolling, Bar and Tube |  |
| SMn21                 | JIS      | Japan          | Forging and Rolling            |  |
| 21MnSi5               | DIN      | Germany        | Steel and Tube                 |  |

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

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