

# IS 2002 Grade 2 – Technical Datasheet

## 1. Chemical & Mechanical Properties

| Property       | Value                          |
|----------------|--------------------------------|
| Carbon (C)     | ≤ 0.20%                        |
| Manganese (Mn) | ≤ 1.00%                        |
| Phosphorus (P) | ≤ 0.05%                        |
| Sulphur (S)    | ≤ 0.05%                        |
| Silicon (Si)   | ≤ 0.30%                        |
| YS             | ≥ 275 MPa                      |
| TS             | 410 – 540 MPa                  |
| Elongation     | ≥ 23%                          |
| Impact         | Optional or as per requirement |
| Hardness       | N/A                            |

## 2. Equivalent / Alternative Grades

| Standard   | Grade  | C (%)  | Mn (%) | P (%)   | S (%)   | Si (%) | Cu (%) | YS (MPa) | TS (MPa)  | Elongation / Impact |
|------------|--------|--------|--------|---------|---------|--------|--------|----------|-----------|---------------------|
| EN 10025-2 | S275JR | ≤ 0.22 | ≤ 1.60 | ≤ 0.035 | ≤ 0.035 | ≤ 0.55 | -      | ≥ 275    | 410 – 560 | ≥ 23% / 27J @ 20°C  |
| ASTM A572  | Gr 42  | ≤ 0.23 | ≤ 1.35 | ≤ 0.040 | ≤ 0.050 | ≤ 0.40 | -      | ≥ 290    | 415 – 550 | ≥ 23% / 20J @ RT    |

## 3. Common Applications

- Structural steel components
- Construction and fabrication
- Heavy machinery parts

- Bridge components

#### 4. Standard Conformance

IS 2002: Specification for Structural Steel Sections – Hot Rolled Steel Channels, Angles, Tees, etc.

Grade Code Meaning:

Grade number represents approximate minimum yield strength in MPa.

#### 5. Disclaimer

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