

80C6 – IS 2507: 1975– Technical Datasheet

1. Chemical & Mechanical Properties

| Property | Value / Range |
|------------------------|---------------|
| C (%) | 0.75–0.85 |
| Mn (%) | 0.60–0.90 |
| Si (%) | 0.10–0.35 |
| S max (%) | 0.050 |
| P max (%) | 0.050 |
| Tensile Strength (MPa) | 1 300 – 1 500 |
| Yield Strength (MPa) | ≥ 1 100 |
| Hardness (HB) | 340 – 420 |
| Elongation (%) | 5 |

2. Equivalent / Alternative Grades

| Grade | Standard | C % | Mn % | Key Alloy | S % max | P % max | Typical σ_u / HB |
|------------------|------------|-----------|-----------|--------------|---------|---------|---|
| SAE 1080 | ASTM A29 | 0.75–0.88 | 0.60–0.90 | Si ≤ 0.35 | 0.040 | 0.040 | σ_u 900 – 1100; HB 260 – 322 |
| JIS SK80 | JIS G 4401 | 0.75–0.84 | 0.60–0.90 | Si ≤ 0.35 | 0.030 | 0.030 | σ_u 890 – 1090; HB 260 – 322 |
| EN C80S (1.2235) | EN 10132-4 | 0.78–0.88 | 0.50–0.90 | Si 0.10–0.35 | 0.025 | 0.025 | σ_u 900 – 1150 (+LC); HB 260 – 330 |

3. Common Applications

- Leaf & coil springs under severe service
- Hand tools, knives

4. Standard Conformance

Cold-rolled spring-steel strip conforming to IS 2507 : 1975.

5. Disclaimer

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