

# 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 $\sigma_u$ / HB
SAE 1080	ASTM A29	0.75–0.88	0.60–0.90	Si ≤ 0.35	0.040	0.040	$\sigma_u$ 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	$\sigma_u$ 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	$\sigma_u$ 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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