

# 50Cr4V2 – IS 2507: 1975 – Technical Datasheet

## 1. Chemical & Mechanical Properties

Property	<b>Value / Range</b>			
C (%)	0.47-0.55			
Mn (%)	0.60-0.90			
Si (%)	0.15-0.35			
Cr (%)	0.90-1.20			
V (%)	0.15-0.30			
S max (%)	0.035			
P max (%)	0.035			
Tensile Strength (MPa)	1 350 - 1 650			
Yield Strength (MPa)	≥1150			
Hardness (HB)	380 - 460			
Elongation (%)	6			

### 2. Equivalent / Alternative Grades

Grade	Standard	С%	Mn %	Key Alloy	S % max	P % max	Typical σu / HB
SAE 6150	ASTM A29	0.48-0.53	0.70-0.90	Si 0.15- 0.35; Cr 0.80-1.10; V 0.15- 0.25	0.040	0.040	σu 980 – 1220 (QT); HB 285 – 352
JIS SUP10	JIS G 4801	0.48-0.55	0.60-0.90	Si 0.15- 0.35; Cr 0.90-1.20; V 0.15- 0.30	0.035	0.035	σu 1150 – 1450; HB 310 – 380
EN 51CrV4 (1.8159)	EN 10089	0.47-0.55	0.70-1.10	Si 0.15- 0.40; Cr 0.90-1.20; V 0.10- 0.25	0.025	0.025	σu 1270 – 1570 (QT); HB 320 – 390

## 3. Common Applications

• High-load suspension springs

• Valve & clutch springs with high dynamic duty

#### 4. Standard Conformance

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

#### 5. Disclaimer

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