

BSK 46 – High-Strength Formable Quality Hot-Rolled Steel

1. Chemical & Mechanical Properties

Property	Value / Range
C (%)	≤ 0.12
Mn (%)	≤ 1.40
Si (%)	≤ 0.40
P (%)	≤ 0.025
S (%)	≤ 0.025
Nb + Ti + V (%)	≤ 0.05
Yield Strength YS (MPa min)	450
Tensile Strength UTS (MPa)	500 – 640
Elongation A80 (%) min	21

2. Equivalent / Alternative Grades

Grade	Standard	C%	Mn%	Si%	P%	S%	Nb/V/Ti	YS (MPa)	UTS (MPa)	El (%)
S460MC	EN 10149-2	≤0.12	≤1.60	≤0.50	≤0.025	≤0.015	≤0.09	460	520-670	14
HSLAS-F Gr 65	ASTM A1011	≤0.23	≤1.35	—	≤0.040	≤0.040	≥0.005 ea	450	≥550	18
SAPH 440	JIS G 3113	≤0.12	≤1.60	≤0.03	≤0.040	≤0.040	—	305	≥440	29-35

3. Common Applications

- Wheel-rim discs and flanges
- Automotive chassis members and cross-members
- Roll-formed tubes, poles, and crash structures
- High-strength structural profiles with high hole-expansion requirements

4. Standard / Supply Note

BSK 46 is a proprietary Indian HSLA grade developed for wheel-rim and chassis applications. It is ordered as hot-rolled or HRPO coil/plate to the mill's BSK 46 specification with cross-reference to IS 5986 or IS 10748 for general requirements (tolerances, testing).

5. Disclaimer

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