

HSFQ 450 – High Strength Formable Quality – Technical Datasheet

1. Chemical & Mechanical Properties

Property	Value
C (%)	≤ 0.10
Mn (%)	≤ 1.40
Si (%)	0.25 - 0.35
P (%)	≤ 0.030
S (%)	≤ 0.030
Al (%)	≥ 0.020
Nb (%)	0.040 - 0.050
Yield Strength (MPa min)	400
Tensile Strength (MPa min)	520
Elongation A80 (%)	25

2. Equivalent / Alternative Grades

Grade	C%	Mn%	Si%	P%	S%	Al%	Nb%	YS (MPa)	UTS (MPa)	El (%)
IS 5986 Fe 510	≤0.20	≤1.60	≤0.35	≤0.040	≤0.040	—	—	355	510–620	20
EN 10149-2 S420MC	≤0.12	≤1.60	≤0.50	≤0.025	≤0.02	—	—	420	480–620	21
ASTM A1011 HSLAS Gr 60	≤0.20	≤1.60	—	≤0.04	≤0.04	—	—	415	515	20

3. Typical Applications

- Automotive chassis & cross-members
- Roll-formed tubes / poles
- High-strength structural profiles

4. Specification Note

Proprietary SAIL HSFQ grade supplied as hot-rolled or HRPO with cross-reference to IS 5986/10748 general requirements.

5. Disclaimer

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