

# HSFQ 500 – High Strength Formable Quality – Technical Datasheet

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## 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)	500
Tensile Strength (MPa min)	570
Elongation A80 (%)	23

## 2. Equivalent / Alternative Grades

Grade	C%	Mn%	Si%	P%	S%	Al%	Nb%	YS (MPa)	UTS (MPa)	El (%)
EN 10149-2 S500MC	≤0.12	≤1.60	≤0.50	≤0.02	≤0.02	—	—	500	550– 700	16
ASTM A1011 HSLAS Gr 70	≤0.20	≤1.60	—	≤0.04	≤0.04	—	—	485	585	18
IS 5986 Fe 540	≤0.22	≤1.60	≤0.35	≤0.04	≤0.04	—	—	540	640	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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