

IRSM 44-97 – Technical Datasheet

(IRS:M-44)

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	≤ 0.03%
Chromium (Cr)	10.5 – 12.5%
Nickel (Ni)	≤ 0.50%
Manganese (Mn)	≤ 1.00%
Silicon (Si)	≤ 1.00%
Phosphorus (P)	≤ 0.040%
Sulphur (S)	≤ 0.015%
Nitrogen (N)	≤ 0.03%
Titanium (Ti)	≥ 0.10% (4xC+2xN)

B. Mechanical Properties

Property	Value
Yield Strength (YS)	≥ 240 MPa
Tensile Strength (TS)	≥ 450 MPa
Elongation	≥ 20 %
Hardness	≤ 200 HB

2. Equivalent / Alternative Grades

Standard	Grade	YS (MPa)	TS (MPa)
ASTM A240	409M / 409	240	450 – 620
EN 1.4512	X2CrTi12	240	450 – 640
JIS G4304	SUS410L	240	450 – 620

3. Common Applications

- Coach flooring & side panels
- Roof sheets & trough floors
- Corrosion-resistant wagon components

4. Standard Conformance

Conforms to IRS:M-44 (1997).

Ferritic stainless-steel 409M grade for corrosion-resistant railway coach fabrication.

5. Disclaimer

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