

# IRSM 43-79 – Technical Datasheet

(IRS:M-43)

## 1. Chemical & Mechanical Properties

### A. Chemical Composition

Element	% Composition
Carbon (C)	≤ 0.25%
Silicon (Si)	≤ 0.40%
Manganese (Mn)	0.60 – 1.20%
Phosphorus (P)	≤ 0.040%
Sulphur (S)	≤ 0.040%
Copper (Cu)	0.20 – 0.35%

### B. Mechanical Properties

Property	Value
Yield Strength (YS)	≥ 250 MPa
Tensile Strength (TS)	410 – 540 MPa
Elongation	≥ 22 %
Impact Toughness	≥ 27 J @ 25 °C

## 2. Equivalent / Alternative Grades

Standard	Grade	YS (MPa)	TS (MPa)
ASTM A502	Grade 2	250	415 – 560
EN 10083-2	C45+Cu	min 250	550 – 700

## 3. Common Applications

- Rivet bars & fasteners for steel bridges

- Bolts and structural connectors requiring weather resistance

#### 4. Standard Conformance

Conforms to IRS:M-43 (1979).

Copper-bearing rivet steel offering enhanced atmospheric corrosion resistance.

#### 5. Disclaimer

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