



TECHNICAL DATA SHEET

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MATERIALS LIBRARY

430 Stainless Steel / SUS430

Ferritic Chromium Stainless Steel

Document Control

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Specification	ASTM A240 Type 430 / JIS SUS430	Product Form / UNS	Sheet, plate, strip, bar by product form / UNS S43000

Engineering use note: Starter-library values are intended for engineering screening and template standardization. Verify against the latest governing specification, drawing, PO, and MTR before production release.

1. General Description

430 is a ferritic stainless steel used for moderate corrosion resistance, oxidation resistance, and good formability at lower alloy cost than nickel-bearing austenitic grades. It is common in appliances, trim, and indoor industrial service.

2. Chemical Composition (wt%)

Property	Value
Chromium (Cr)	16.0-18.0
Carbon (C)	<=0.12
Manganese (Mn)	<=1.00
Silicon (Si)	<=1.00
Phosphorus (P)	<=0.04
Sulfur (S)	<=0.03
Nickel (Ni)	<=0.75
Iron (Fe)	Balance

3. Mechanical Properties

Property	Value
Condition	Annealed
Ultimate tensile strength	>= 450 MPa

Property	Value
0.2% yield strength	≥ 205 MPa
Elongation	≥ 22 %
Hardness	≤ 89 HRB typical annealed

4. Physical Properties

Property	Value
Density	7.70 g/cm ³
Elastic modulus	200 GPa
Thermal conductivity	26 W/m.K
Melting range	1425-1510 C

5. Heat Treatment / Processing

Normally supplied annealed. 430 is not hardenable by heat treatment; cold work is limited compared with austenitic grades.

6. Corrosion / Environmental Performance

Good resistance in many indoor and mildly corrosive environments, but generally lower than 304 in aggressive or chloride-bearing service.

7. Key Characteristics

- Nickel-free ferritic grade
- Good oxidation resistance
- Magnetic
- Good decorative finish capability

8. Typical Applications

- Appliance panels
- Automotive trim
- Indoor architectural trim
- Heat-resistant panels
- Kitchen equipment

9. Standards & Equivalents

ASTM A240 Type 430
JIS SUS430
UNS S43000
EN 1.4016

10. Notes & Limitations

Use with caution in welded or highly formed parts where toughness and ductility requirements are demanding. Surface finish strongly affects decorative appearance and corrosion performance.