

**AISI 430 / UNS S43000 / DIN 1.4016**

Iron Chrome Ferritic Stainless Steel

Alloy 430 Data Sheet

**Introduction**

AISI 430 is basic Iron Chrome Ferritic Stainless Steel with moderate corrosion resistance, good, non hardenable with good mechanical properties. Primarily used in form of Bars & Hot Rolled Plates.

**Chemical Composition ( Typical )**

Element	Limits	
	min	max
Carbon	0.000	0.120
Manganese	0.000	1.000
Phosphorus	0.000	0.040
Sulphur	0.000	0.030
Silicon	0.000	1.000
Chromium	16.000	18.000
Molybdenum	0.750	0.125
Iron	Remainder	

**Mechanical Properties ( Typical )**

Parameter	Value
Yield 0.2 % ( Mpa/Nmm <sup>2</sup> ), Min	205
Tensile ( Mpa/Nmm <sup>2</sup> ), Min	450
Elongation (% in 50MM ), Min	22
Reduction Area(%), Min	--
Hardness ( BHN ), Max	183

**Physical Properties**

Parameter	Value
Density ( Kg/m <sup>3</sup> )	7750
Elastic Modulus ( Gpa )	200
*Co-eff of Expansion ( $\mu\text{m}/\text{m}/^\circ\text{C}$ )	11.4
*Thermal Condc. (W/m.K)	26.3
Electric Resistivity (n $\Omega$ .m) 25°C	600

\*Note : @500°C

**Corrosion Data**

AISI 430 offers moderate corrosion resistance & low as compared to 300 Series Austenitic Stainless Steel. Although it offers excellent corrosion resistance to Nitric & organic acids with better stress corrosion cracking. Buffed surface products has better resistance to corrosion. Crevice & pitting resistance is comparable to AISI 304.

## Equivalent Grade Designation

AISI 430  
SUS430  
SS 430  
UNS S43000  
1.4016  
X8Cr17  
AFNOR Z8C-17  
GOST 12Ch17  
BS 430S15

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## Available Product Forms

Round, Square, Hexagon & Flat Bars  
Seamless / Welded Pipes  
Seamless / Welded Tubes  
Hot & Cold Rolled Plates & Sheets  
Forged Bars  
Forged Flanges

## Common Manufacturing Specifications

AMS 5503, AMS 5627, ASTM A176, ASTM A182, ASTM A240, ASTM A268, ASTM A276, ASTM A314, ASTM A473, ASTM A479, ASTM A493, ASTM A511, ASTM A554, ASTM A580, ASTM A815, ASME SA 176, ASME SA 182, ASME SA 240, ASME SA A268, ASME SA A276, ASME SA A314, ASME SA A473, ASME SA A479, ASME SA A493, ASME SA A511, ASME SA A554, ASME SA A580, ASME SA A815

## Alternate to Alloy

AISI 429, AISI 430F, AISI 304 & AISI 316 are better alternative with improved weldability, increased machinability, corrosion resistance & cold workability respectively.

## Applications & Industries

Steam & Gas turbine parts  
Valve & Pumps body parts  
Mining Equipments  
Machine parts & Cutlery  
Fasteners - Bolts, Screws, Nuts & Springs  
Petrochemical Equipments  
Automotive parts & Bushes

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