

**AISI 430F / UNS S43020 / DIN 1.4105**

Iron Chrome Ferritic Stainless Steel

Alloy 430F Data Sheet

**Introduction**

AISI 430F is improved Iron Chrome Ferritic Stainless Steel with improved machinability than 430. Non hardenable alloy with moderate corrosion resistance.

**Chemical Composition ( Typical )**

Element	Limits	
	min	max
Carbon	0.000	0.120
Manganese	0.000	1.250
Phosphorus	0.000	0.600
Sulphur	0.150	--
Silicon	0.000	1.000
Chromium	16.000	18.000
Molybdenum	0.000	0.600
Iron	Remainder	

**Mechanical Properties ( Typical )**

Parameter	Value
Yield 0.2 % ( Mpa/Nmm <sup>2</sup> ), Min	275
Tensile ( Mpa/Nmm <sup>2</sup> ), Min	450
Elongation (% in 50MM ), Min	20
Reduction Area(%), Min	45
Hardness ( BHN ), Max	223

**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, excellence crevice & pitting resistance. General corrosion resistance is quite poor as compared to 304 Stainless Steel. Although buffed polished surface can offer better general corrosion than raw & semi finished product.

## Equivalent Grade Designation

AISI 430  
SUS430  
SS 430  
UNS S43000  
1.4016  
X 14 CrMoS 17  
AFNOR Z 13 CF 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

ASTM A314, ASTM A473, ASTM A581, ASTM A582, ASTM A895, ASME SA 314, ASME SA 473, ASME SA 581, ASME SA 582, ASME SA 895.

## Alternate to Alloy

AISI 429, 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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