

## Steel grade

Material No.	PREMIUM 430F
AISI	430F
Search for alternatives in the ABRAMS STEEL GUIDE	<a href="http://www.abrams-steelguide.com/alternatives/430F">www.abrams-steelguide.com/alternatives/430F</a>

## Shapes



**Smart Flat Stock [Smart]  
Standardized Precision Blanks**  
L: 12"  
L: 24"



**Smart Flat Stock Metric [SmartM]  
Standardized Precision Blanks Metric**  
L: 300 mm  
L: 600 mm

## Chemical composition AISI 430F (reference value %)

C	Si	Mn	P	S	Cr	Mo
0.10 - 0.17	0 - 1.0	0 - 1.5	0 - 0.04	0.15 - 0.35	15.5 - 17.5	0.2 - 0.3

## Physical properties

Hardness (delivery condition)	approx. 270 HB, tempered			
Tensile strength $R_m$ (as received condition)	approx. 124.7 KSI			
Working hardness	max. 26 HRC			
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	68 - 212°F	68 - 392°F	68 - 572°F	68 - 752°F
	10.0	10.5	10.5	10.5
Thermal conductivity $W/(m \cdot K)$	68°C			
	25.0			

## Technical properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant but difficult to weld.

## Applications

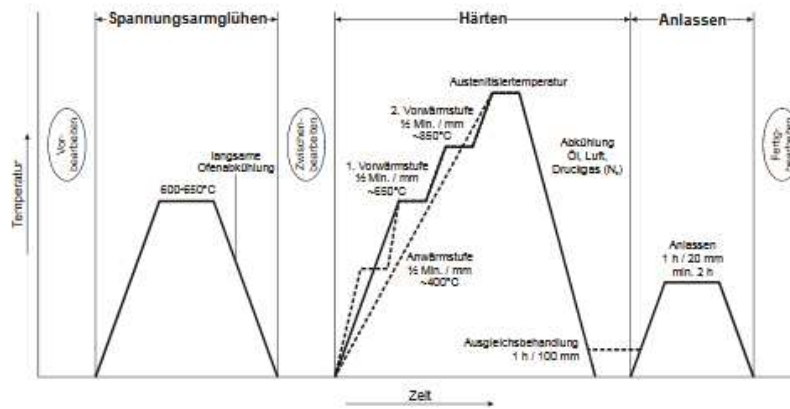
Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, bushes, etc.

## Heat treatment

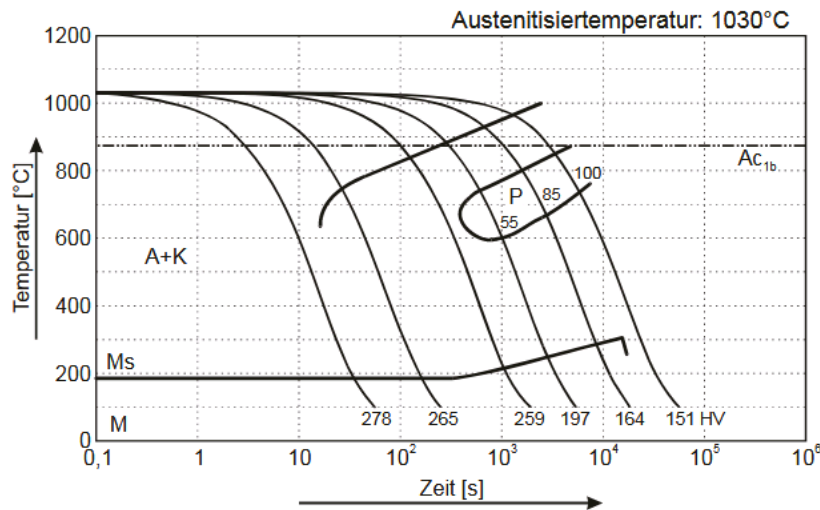
Soft annealing	Temperature	Cooling	Hardness
	1382 - 1562°F	Air	max. 220 HB
Hardening	Temperature	Quenching in	
	1742 - 1958°F	Air, oil, compressed gas (N <sub>2</sub> )	



## Heat treatment scheme



## Continuous TZU-diagram



## Tempering diagram

