

Steel grade

Material No.	PREMIUM 420FM
AISI	420FM
Search for alternatives in the ABRAMS STEEL GUIDE	www.abrams-steelguide.com/alternatives/420FM

Shapes



Precision Ground Flat Stock Metric oversized [GFSM O/S]
L: 500 mm
L: 1,000 mm



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



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

Chemical composition AISI 420FM (reference value %)

C	Si	Mn	P	S	Cr	Ni
0.28 - 0.38	0 - 1.0	0 - 1.4	0 - 0.03	0.05 - 0.1	15.0 - 17.0	0 - 1.0

Physical properties

Hardness (delivery condition)	max. 330 HB, tempered
Tensile strength R_m (as received condition)	approx. 163.1 KSI
Working hardness	max. 33 HRC

Technical properties

Pre-hardened, corrosion-resistant plastic mold steel. Magnetisable with good machinability. Resistant to aggressive plastics and humid conditions. Further heat treatment is not intended.

Applications

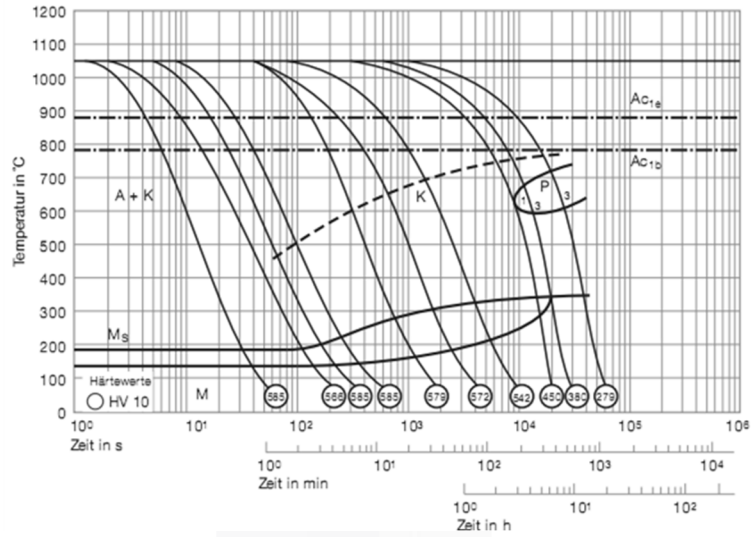
Mechanical engineering, apparatus engineering, plastic processing, injection tools, base plates, assembling parts, molding frames, plastic molds, extrusion tools, valves, steam valves, water valves, fittings parts, pump construction, pump rods, compressor construction, compressor parts, surgical instruments.

Heat treatment

Soft annealing	Temperature		Cooling		Hardness			
	1562 - 1616°F		Furnace		max. 330 HB			
Hardening	Temperature		Quenching in		Hardness after quenching			
	1832 - 1922°F		Oil		48 HRC			
Tempering	212°F	392°F	572°F	752°F	842°F	932°F	1022°F	1112°F
	48 HRC	48 HRC	47 HRC	46 HRC	47 HRC	47 HRC	36 HRC	30 HRC



Continuous ZTU-diagram



Tempering diagram

