Steel grade

Material No.	PREMIUM 410
AISI	410
Search for alternatives in the ABRAMS STEEL GUIDE	**www.abrams-steelguide.com/alternatives/410**

Shapes

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

$mart Flat Stock Metric [$martM]
Standardized Precision Blanks Metric
L: 300 mm
L: 600 mm

Cold Finished Rounds [CF]
Precision Round Bars
L: 18"
L: 36"

Decarb Free Rounds [DCF]
Precision Round Bars
L: 18"
L: 36"

Chemical composition AISI 410 (reference value %)

C	Si	Mn	P	S	Cr	Ni
0.08 - 0.15	0 - 1.0	0 - 1.5	0 - 0.04	0 - 0.03	11.5 - 13.5	0 - 0.75

Physical properties

Hardness (delivery condition)	max. 252 HB, tempered			
Tensile strength R_m (as received condition)	approx. 123.2 KSI			
Working hardness	max. 31 HRC			
Thermal expansion coefficient 10^{-6}m/(m • K)	68 - 212°F	68 - 392°F	68 - 572°F	68 - 752°F
	10.5	11.0	11.5	12.0
Thermal conductivity W/(m • K)	68°C			
	30.0			

Technical properties

Corrosion resistant, martensitic steel (tempered condition), which shows good mechanical and good corrosion resistance inmoderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 752°F.

Applications

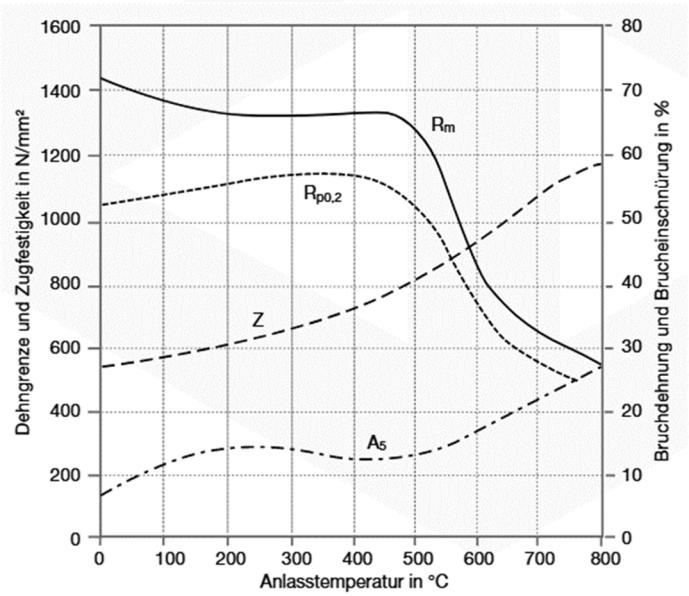
Hydraulic engineering, mechanical engineering, pump industry, oil industry, petrochemical industry, decorative uses, kitchen equipment, food industry, environmental technology, energy technology (hydroelectric power).

Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	1373 - 1517°F	Furnace, air	max. 219 HB

	Temperature	Quenching in
Hardening	1742 - 1832°F	Air, oil

Tempering diagram



Consolidation chart