Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4006
Description	X12Cr13
AISI/SAE	410
Search for alternatives in the ABRAMS STEEL GUIDE®	**www.steel-guide.eu/alternatives/410**

Specifications

€co-Präz® [€co]
L: 500 mm

Chemical composition AISI/SAE 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. 850 N/mm²			
Working hardness	max. 31 HRC			
Thermal expansion coefficient 10^{-6}m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C
	10,5	11,0	11,5	12,0
Thermal conductivity W/(m • K)	20°C			
	30,0			

Technical properties

Corrosion resistant, martensitic steel (tempered condition), which showes good mechanical and good corrosion resistance in moderately aggressive substances. It has a low susceptibility to embrittlement, is polishable to a high gloss and can be used at temperatures up to 400°C.

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

Soft annealing	**Temperature**	**Cooling**	**Hardness**
	745 - 825°C	Furnace, air	max. 219 HB
Hardening	**Temperature**	**Quenching in**	
	950 - 1000°C	Air, oil	

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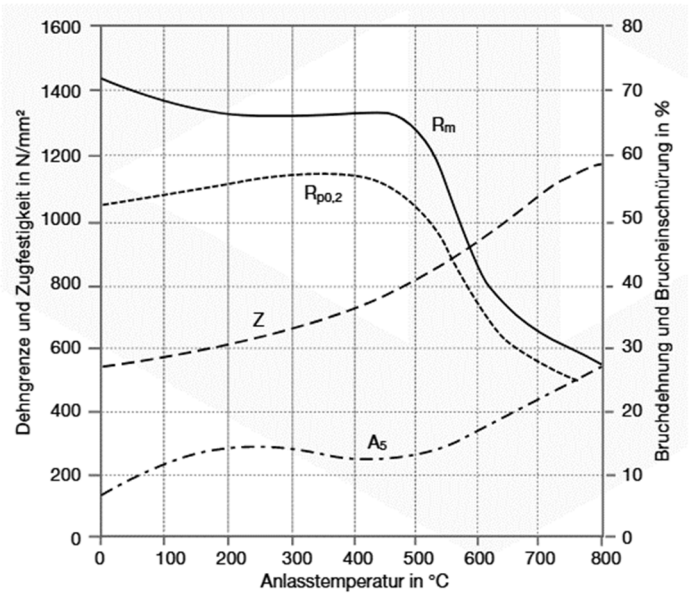
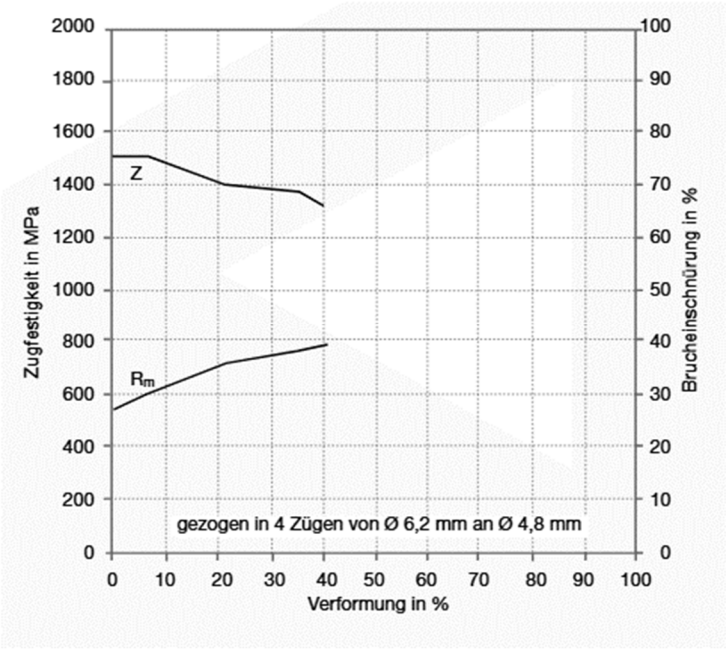
www.abrams-artprojects.eu

Tempering diagram



consolidation chart



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