



Sales Office:

GVG - Gröditz Vertriebsgesellschaft mbH · Halskestrasse 23-25 · D-47877 Willich

Phone: +49 (0)2154 9415-0 · Fax: +49 (0)2154 9415-50

E-mail: vertrieb@stahl-groeditz.de · Homepage: <http://www.stahl-groeditz.de>

1.2738 (similar to AISI P20 + Ni)

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Conventional melting (EF+LF+VD)

GENERAL:

- uniform hardness across the cross-section
- very good polishability
- good machinability
- hardenable and temperable plastic mould steel
- nitridable
- suitable for chrome plating

APPLICATIONS:

Die steel for plastic moulds with a thickness of about 400 mm plus, if uniform hardness, elevated toughness and polishability is required in the contour as well. Moulds for TV housings and rear walls, copier housings; shock-absorber moulds; moulds for dashboards and large outside body parts; waste bin moulds; pressure casting frames

CHEMICAL ANALYSIS: %

C	Si	Mn	P	S	Cr	Mo	Ni
0,35-0,45	0,20-0,40	1,30-1,60	≤ 0,035	≤ 0,005	1,80-2,10	0,15-0,25	0,90-1,20

PHYSICAL PROPERTIES:

Coefficient of thermal expansion	20-100 °C	20-200 °C	20-300 °C	20-400 °C	20-500 °C	20-600 °C	20-700 °C
[10 ⁻⁶ m/(m x K)]	11.1	12.9	13.4	13.8	14.2	14.6	14.9
Thermal conductivity	20 °C	350 °C	700 °C				
[W/(m x K)]	35.7	33.2	31.9				

ULTRASONIC:

ASTM A388 - FBH max. 3 mm (1/8 inch) or
SEP 1921 – test group 3 – class E , e or
acc. to your request

CLEANLINESS:

ASTM E45- Method A with type A ≤ 1,5 ,
B; C and D each ≤ 2 or
DIN 50602– K4 ≤ 20 or
acc. to your request

DELIVERY CONDITION:

hardened and tempered

SERVICE HARDNESS:

280 – 325 HB or acc. to your request

STRUCTURE:

fine bainitic structure



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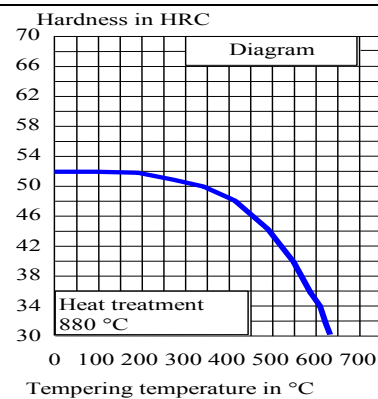
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HEAT TREATMENT:

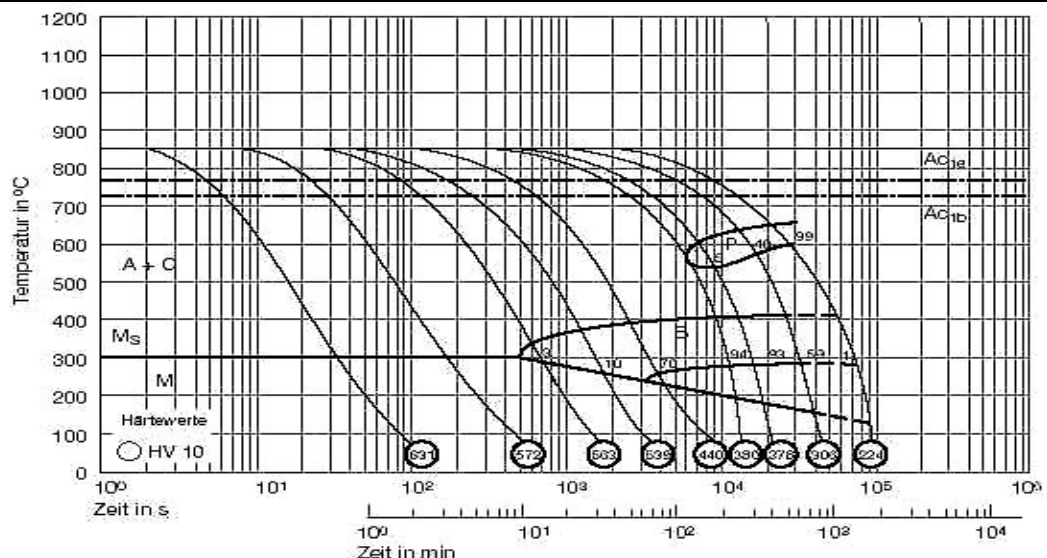
<i>Hot forming</i>	<i>Soft annealing</i>	<i>Hardening</i>	<i>Tempering</i>
1050 – 850 °C	710 – 740 °C	850 – 880 °C	560 – 680 °C #

TEMPERING DIAGRAM:

values in HRC
tested on samples dia. 25 x 50 mm long
hardened at 880 °C in oil



CCT GRAPH:



Mechanical Properties

Approximate tested value at room temperature, only for your reference.

0.2%Yield Strength Rp0.2[MPa]	Tensile Strength Rm[MPa]	Elongation A5[%]	Reduction Z[%]	Impact Value ISO -V [J]
820	1020	19	47	12

DELIVERY SIZES:

Rounds – up to 1300 mm

Blocks – up to 1200 mm thickness or acc. to your request