1.2363 X 100 CrMoV 5

AISI A2, BS BA2, AFNOR Z 100 CDV 5

Cold work tool steel for the production of cutting tools, thread rolling dies, shear blades, and hardened guide bars with large cross-sections. Material 1.2363 bridges the gap between 1.2842 and 1.2379. It can be machined easily, similar to 1.2842, and grinding hardened components is straightforward compared to 1.2379.

1.2363, much like 1.2379, excels in vacuum hardening and offers improved toughness. Use 1.2363 when wear resistance or through-hardening is insufficient with 1.2842 but 1.2379 is not yet necessary or lacks the required toughness.

1.2363 is easily workable and can achieve hardness up to 63 HRC. Good wear properties are achieved through secondary hardening. It is an ideal material for through-hardened guide bars with a thickness over 40 mm.

Color code:

Brown (1.2363).

1.2363

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Steel Glossary 138

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PräziPlan® – Präzisionsflachstahl (nach DIN 59350)

Execution:

Annealed, Strength 800-900 MPa,
Max Hardness 241 HB,
Thickness ground with Ra = 6 µm,
Width finely processed,
Machined free from decarburization on all sides

Tolerances:

width:	+0.40 / -0mm
thickness:	+0.25 / -0mm
length:	+40.00 / -0mm

length: 1,000 mm — price per piece

Breite [mm] \ *thickness [mm]*	*8.2*	*10.4*	*12.4*	*15.4*	*20.4*	*25.4*	*30.4*	*40.4*	*50.4*
25.3	31	36	40	43	45				
30.3	35	39	46	57	69				
40.3	42	47	51	65	79	90	103		
50.3	48	53	59	71	89	103	115	130	
60.3	53	59	65	79	96	113	127	169	
80.3	71	79	86	99	121	136	157	198	255
100.3	86	94	111	126	146	167	198	256	297
125.3	98	126	136	157	184	221	261	334	382
150.3	127	144	157	178	228	259	292	376	
200.3		180	211	251	317	365	423	506	573
250.3					384	449	503	620	732

square, length: 1,000 mm — price per piece

10,4	*12,4*	*16,4*	*20,4*	*25,4*	*30,4*	*40,4*	*50,4*	*60,4*	*80,4*	*100,4*
43	48	49	55	84	98	136	178	230	396	568

We provide special versions quickly and affordably!

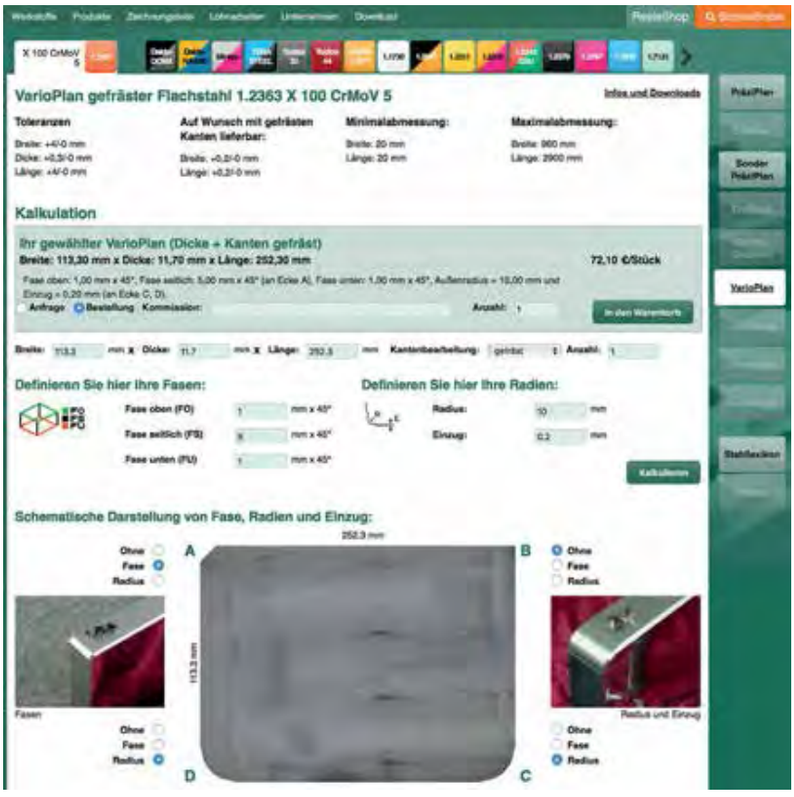
1.2363 X 100 CrMoV 5

VarioPlan®

Precision-machined semi-finished products in custom dimensions.

- Flexible in width, thickness, and length
- Edges sawn or milled
- Optional with chamfers and/or corner radii
- Production in 2 to 3 days
- Easy calculation

Use our online calculation in the webshop:
www.varioplan.de



1.2363 X 100 CrMoV 5

chemical composition [%]

	C	Si	Mn	P	S	Cr	Mo	V
max.	1.05	0.4	0.8	0.03	0.03	5.5	1.2	0.35
min.	0.95	0.1	0.4			4.8	0.9	0.15

Cold work tool steel for the production of cutting tools, thread rolling dies, shear blades, and hardened guide bars with large cross-sections. Material 1.2363 bridges the gap between 1.2842 and 1.2379. It can be machined easily, similar to 1.2842, and grinding hardened components is simple compared to 1.2379. 1.2363 is also very well suited for vacuum hardening.

1.2363 should be used when, for the application task, the wear resistance or through-hardening capability of 1.2842 is insufficient, but 1.2379 is not yet necessary or lacks the required toughness.

1.2363 is easily machinable and can achieve hardness of up to 63 HRC. Good wear properties are achieved through secondary hardening. It is also well-suited for through-hardening larger component cross-sections of guide bars, making it the ideal material for hardened guide bars over 40mm in thickness.

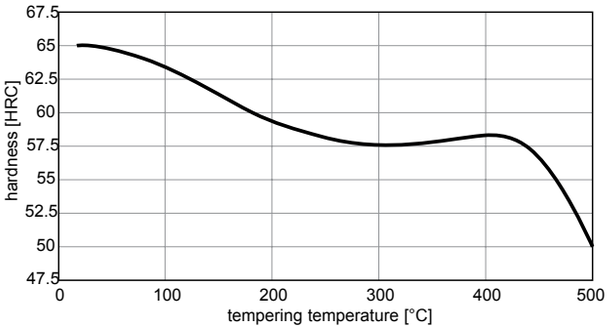
You can obtain this material from us in the form of precision flat steel (standard and custom dimensions), VarioPlan®, as ready-to-install, hardened guide bars according to your drawings, and as semi-finished products tailored to your specifications.

The risk of cracking during repair welding is present, as is common with tool steels.

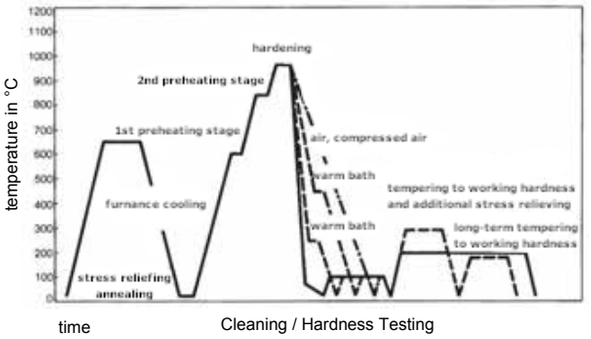
Color coding: Brown

Tempering diagram

Hardening temperature: 970°C / Oil, Sample cross-section: Square 20 mm



Heat treatment schedule



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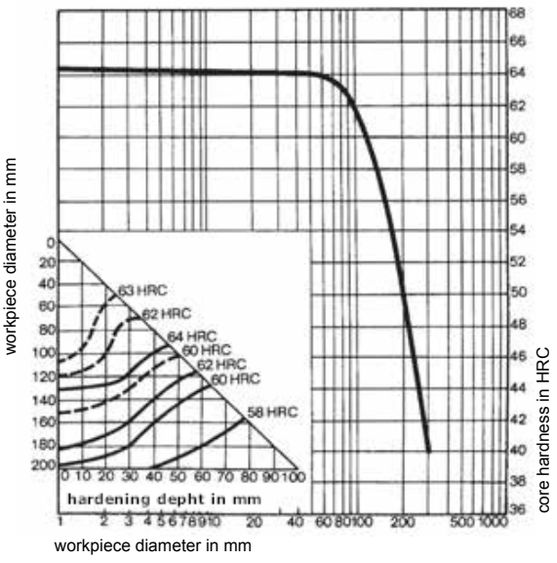
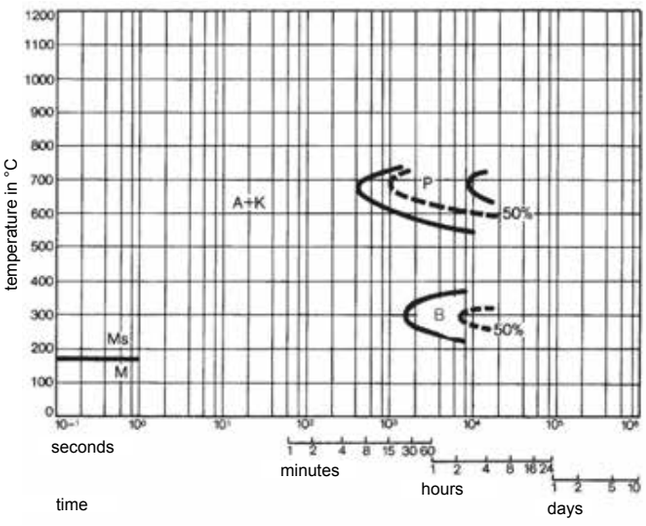
Translation: Dependency of core hardness and hardening depth on the workpiece diameter



Isothermal TTT diagram
Austenitization temperature: 960°C, Holding time: 15 minutes.



hardening temperature: 960°C
hardening medium: — Öl
– – – Luft

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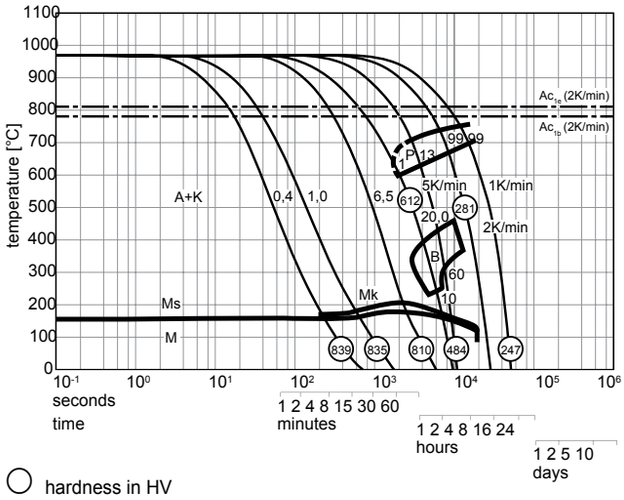
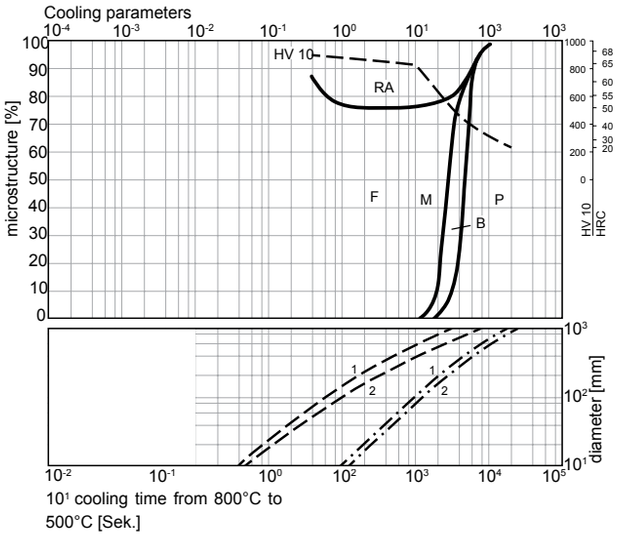
Continuous Cooling Transformation (CCT) diagram
for austenitization temperature: 960°C, holding time: 15 minutes.



○ hardness in HV
1 . . . 99 Microstructure percentages in %
0.4 . . . 20.0 Cooling parameters,
i.e., cooling duration from 800–500°C in s x 10^{-2}
5 . . . 1K/min cooling rate
in K/min within the range of 800–500°C
Mk .....Grain boundary martensite
B .....bainit

Microstructure diagram



– – – oil cooling
– • – air cooling
1 ..... workpiece edge
2 ..... workpiece center