

1.2343 X 37 CrMoV 5-1

1.2343ESU X 37 CrMoV 5-1 ESU

Hot work steel for the production of highly stressed hot work tools, hot extrusion dies, die-casting tools, hot shear blades, and forming dies.
Excellent suitability as ESU grade for plastic molds with a very fine, polished surface.

Color code:

Red/Black (1.2343)



1.2343 X 37 CrMoV 5-1

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Red/Green (1.2343 ESU)



1.2343ESU X 37 CrMoV 5-1 ESU

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GEBRÜDER RECKNAGEL 
Präzision in Stahl 229

1.2343 X 37 CrMoV 5-1

PräziPlan® Precision flat steel (according to DIN 59350)

Execution:

Thickness ground with Ra = 6 µm, width finely machined, machined free from decarburization on all sides

Tolerances:

width: +0.2 / -0 mm

thickness: +0.2 / -0 mm

length: +20.0 / -0 mm

length: 500 mm

price per piece

		thickness [mm]							
		10.4	12.4	16.4	20.4	25.4	32.4	40.4	50.4
width [mm]	12.3	18							
	16.3	20	21						
	20.3	21	22	24					
	25.3	22	24	33	36				
	32.3	25	32	37	44	55			
	40.3	29	33	44	48	60	72		
	50.3	34	38	48	57	70	83	103	
	63.3	44	57	66	70	85	103	118	134
	80.3	49	56	70	80	93	118	140	166
	100.3	60	70	83	95	111	142	172	207
	125.3	82	89	111	124	138	181	213	250
	160.3	102	111	146	159	184	229	286	324
	200.3	120	136	174	196	214	283	285	359

square, length: 500 mm

price per piece

	10.4	12.4	16.4	20.4	25.4	32.4	40.4	50.4
	19	23	31	32	47	66	80	117

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GEBRÜDER RECKNAGEL 
Präzision in Stahl

1.2343 X 37 CrMoV 5-1

PräziPlan® Precision flat steel (according to DIN 59350)

Execution:
 Thickness ground with Ra = 6 µm,
 width finely machined,
 machined free from
 decarburization on all sides

Tolerances:

width: +0.2 / -0 mm
 thickness: +0.2 / -0 mm
 length: +20.0 / -0 mm

length: 1,000 mm price per piece

		thickness [mm]														
		8.2	10.4	12.4	15.4	16.4	20.4	25.4	30.4	32.4	40.4	50.4	60.4	70.4	80.4	100.4
width [mm]	20.3	30	33	37	41	45										
	25.3	32	36	40	47	53	58									
	30.3	37	40	49	57	59	68	89								
	32.3	38	41	52	59	61	71	90	98							
	40.3	40	48	54	68	71	78	99	109	117						
	50.3	48	55	63	73	80	95	115	131	136	167					
	60.3	54	66	70	84	101	107	131	146	155	180	214				
	63.3	59	71	78	95	108	117	140	163	171	196	223	249			
	70.3	65	71	79	94	111	120	142	162	179	214	251	277			
	80.3	71	81	92	104	117	132	154	179	191	225	263	308	339		
	100.3	89	101	115	130	137	157	183	213	230	282	334	374	438	501	
	120.3	120	135	146	167	184	201	226	277	296	349	410	490	569	657	766
	150.3	152	159	163	185	213	236	276	326	349	409	481	557	636	740	860
	200.3	171	196	221	263	284	329	376	433	464	524	642	756	917	1005	1126

square, length: 1,000 mm price per piece

	20.4	25.4	30.4	40.4	50.4	60.4	70.4	80.4	100.4
	52	77	95	130	188	228	334	396	580

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GEBRÜDER RECKNAGEL  Präzision in Stahl 231

1.2343ESU X 37 CrMoV 5-1 ESU

EcoPlan® 150 / 400 Precision flat steel (according to DIN 59350)

Execution:
 Soft annealed, strength 700-800 N/mm²,
 precision machined free from
 decarburization on all sides, including in
 length.

Tolerances:

width: +0.2 / -0 mm
 thickness: +0.2 / -0 mm
 length: +0.4 / -0 mm

length: 150.3 mm price per piece

		thickness [mm]									
		8.4	10.4	12.4	15.4	20.4	25.4	30.4	40.4	50.4	
width [mm]	150	15	15	20	21	24					
	20.3	15	15	20	21	24					
	25.3	16	16	21	23	25	32				
	30.3	17	17	22	24	27	33	42			
	40.3	19	19	26	28	30	38	49	51		
	50.3	20	20	28	30	33	41	51	56	60	65
	60.3	24	24	30	31	38	46	59	60	65	
	80.3	27	30	37	41	49	57	67	68	74	
	100.3	32	39	43	50	58	62	74	75	84	
	120.3	38	41	46	59	63	67	80	83	95	
150.3	43	49	56	72	73	76	91	97	112		

length: 400.3 mm price per piece

		thickness [mm]														
		8.4	10.4	12.4	15.4	20.4	25.4	30.4	40.4	50.4	60.4	80.4	100.4			
width [mm]	400	27	28	32	34	39										
	20.3	27	28	32	34	39										
	25.3	30	31	34	35	41	56									
	30.3	32	33	37	39	43	59	70								
	40.3	34	37	41	43	47	65	78	81							
	50.3	39	40	56	57	59	72	86	92	105						
	60.3	43	45	61	62	62	79	95	102	119	138					
	80.3	48	56	68	74	83	94	113	125	146	170	203				
	100.3	56	64	77	90	96	108	131	146	172	201	243	276			
	120.3	73	77	84	105	109	122	149	168	199	232	282	322			
	150.3	87	87	97	126	127	145	175	201	238	278	342	392			
	200.3	106	106	119	155	157	181	220	255	304	356	441	507			
	250.3	125	125	140	184	188	218	264	309	370	432	541	623			
	300.3	144	144	162	212	220	254	310	363	436	509	641	738			
	400.3	181	181	205	271	281	327	399	471	569	664	839	968			

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GEBRÜDER RECKNAGEL  Präzision in Stahl

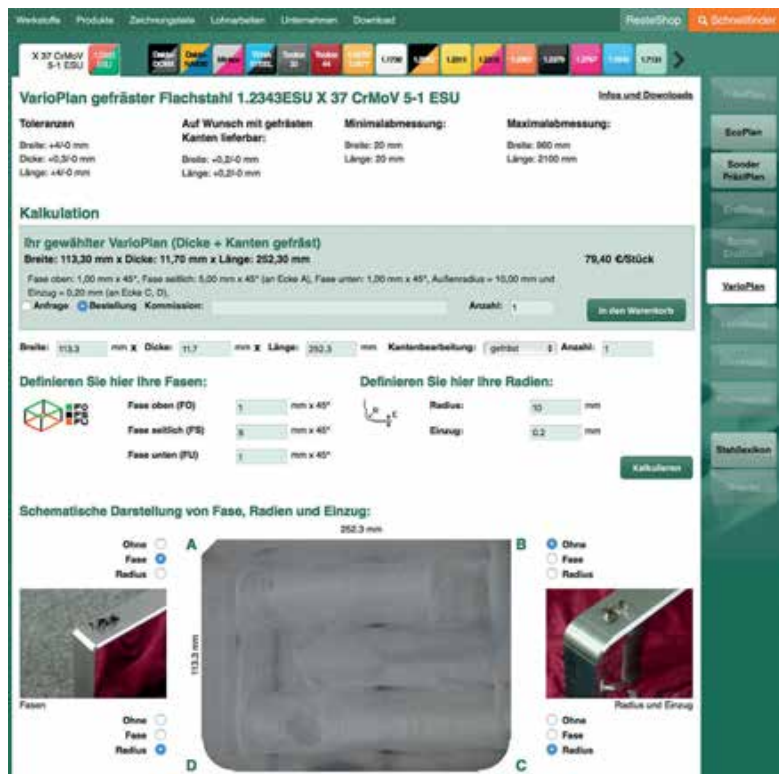
1.2343ESU X 37 CrMoV 5-1 ESU

VarioPlan®

Finely milled semi-finished products in customizable dimensions.

- Customizable in width, thickness, and length
- Edges sawn or milled
- Optionally with chamfers and/or corner radius
- Production in 2 to 3 days
- Simple cost estimation

Use our online cost estimation tool on our webshop:
www.varioplan.de.



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GEBRÜDER RECKNAGEL Präzision in Stahl 233

1.2343 X 37 CrMoV 5-1

VarioRond®

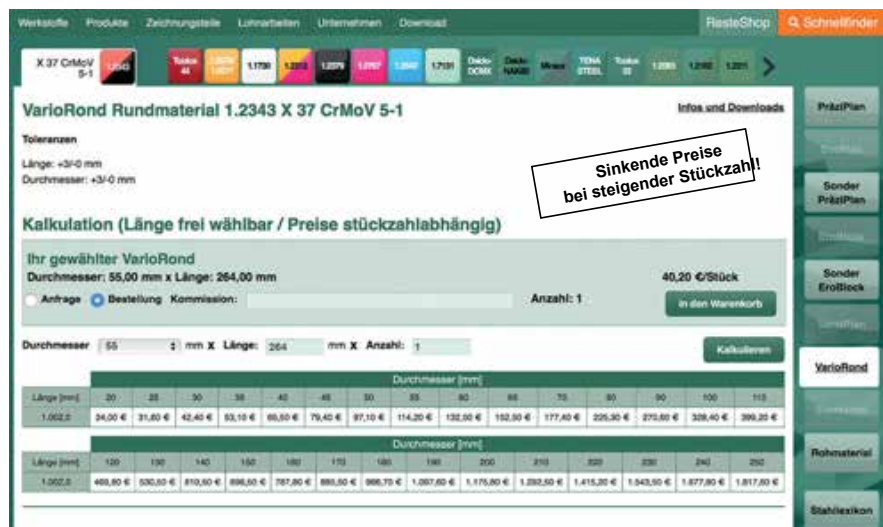
Round material sections with customizable length at a unit price.

Execution and Tolerances:

- Length, sawn: +3.0 / -0 mm
- Diameter: +3.0 / -0 mm
- Diameter range: 20–250 mm

Flexible online cost estimation:
www.variorond.de

- Customizable desired length
- Unit prices for your desired length
- Sawing costs included
- No additional surcharges



Round bars, grinded

Tolerances:

- diameter: h8
- length: +30.0 / -0 mm

length: 1,000 mm price per piece

	diameter [mm]				
	10	12	15	20	25
10	10	13	21	42	63

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GEBRÜDER RECKNAGEL Präzision in Stahl



1.2343 X 37 CrMoV 5-1

Raw material

Sheets or cut parts thereof, rolled according to EN 10029 Class C

thickness [mm]									
13.4	20	25	30	35	40	45	50	55	
60	70	80	90	100	110	120	130	140	
150	160	175	185	195	205	215	225		

Larger dimensions than forged bars available upon request.

- We cut the parts according to your specifications.
- Pre-machined as VarioPlan® available.
- Flat bar steels are available for quick delivery.
- Round material is available as VarioRond®.

Select affordable raw materials online, including custom cutting options:

www.ResteShop.de

Fast, clear, and transparent: Offcut shop and Quick finder at www.stahlnetz.de

Offcut shop

- All materials
- With cutting service
- Immediately from stock
- Affordable special prices for remnants
- While supplies last

Quick finder

- All products compared
- Your custom parts fully calculated
- Easy selection of the optimal solution

WebShop:

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Präzision in Stahl

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1.2343ESU X 37 CrMoV 5-1 ESU

Raw material

Sheets or forged pieces and cut parts thereof, rolled according to EN 10029 Class C.

thickness [mm]									
40	50	60	70	75	80	85	90	95	
100	105	110	120	130	140	150	160	170	
180	190	205	225	235	305	405			

Larger dimensions than forged bars available upon request.

- We cut the parts according to your specifications.
- Pre-machined as VarioPlan® available.
- Flat bar steels are available for quick delivery.
- Round material is available as VarioRond®.

Select affordable raw materials online, including custom cutting options:

www.ResteShop.de

Fast, clear, and transparent: Offcut shop and Quick finder at www.stahlnetz.de

Offcut shop

- All materials
- With cutting service
- Immediately from stock
- Affordable special prices for remnants
- While supplies last

Quick finder

- All products compared
- Your custom parts fully calculated
- Easy selection of the optimal solution

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Präzision in Stahl

1.2343

1.2343
ESU

1.2343 X 37 CrMoV 5-1

1.2343ESU X 37 CrMoV 5-1 ESU

Hot work steel for the production of highly stressed hot work tools, hot extrusion dies, die-casting tools, hot shear blades, and forging dies.

You can obtain this material from us as precision flat steel (standard and custom dimensions), VarioPlan®, VarioRond®, and as raw material cuttings.

Chemical composition [%]

	C	Si	Mn	P	S	Cr	Mo	Ni	V
max.	0.41	1.2	0.50	0.03	0.02	5.5	1.5	0.21	0.5
min.	0.33	0.8	0.25			4.8	1.1		0.3

You can get 1.2343 ESU as VarioPlan® and EcoPlan® from us.

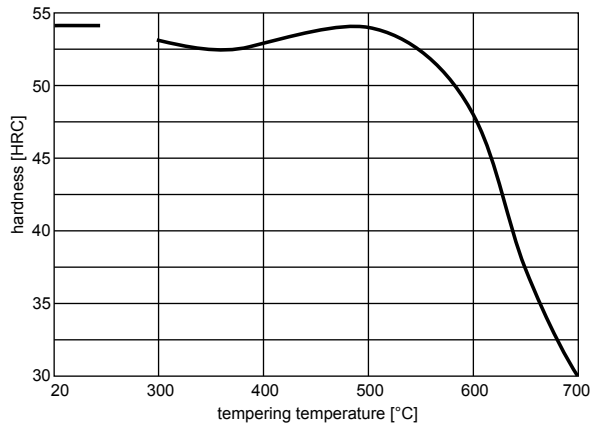
Additionally, you can obtain 1.2343 from us as a fully machined drawing part, customized to your specifications.

Color coding: Red/Black.

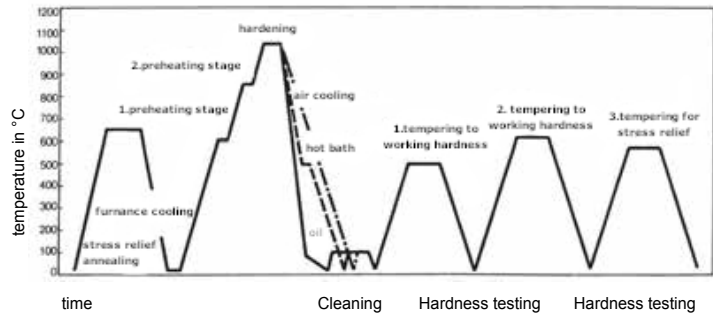


Tempering chart:

Hardening temperature: 1020°C, Test cross-section: Vkt. 50 mm



Heat treatment schedule



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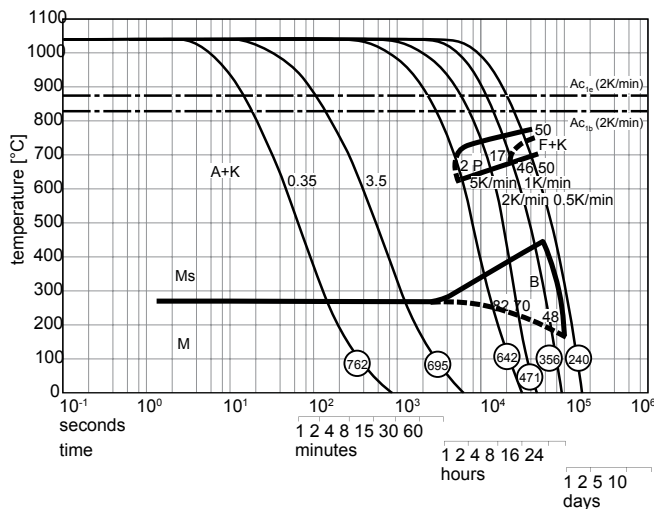
GEBRÜDER RECKNAGEL Präzision in Stahl 237

1.2343 X 37 CrMoV 5-1

1.2343ESU X 37 CrMoV 5-1 ESU

Continuous cooling transformation (CCT) diagram

Austenitization temperature: 1080°C, Holding time: 15 minutes



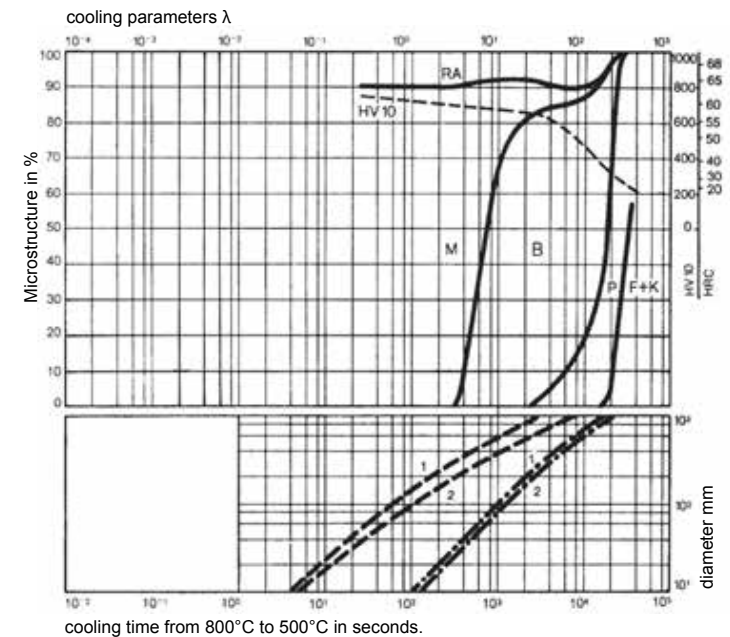
○ Hardness in HV

2.46 microstructure proportions in %
 0.35...7.5 cooling parameters,
 meaning the cooling duration from 800°C to 500°C in $s \times 10^{-2}$
 5...0.5 K/min cooling rate,
 in the range from 800°C to 500°C

Chemische Zusammensetzung [%]

	C	Si	Mn	P	S	Cr	Mo	Ni	V
max.	0.41	1.2	0.50	0.03	0.02	5.5	1.5	0.21	0.5
min.	0.33	0.8	0.25			4.8	1.1		0.3

Microstructure quantity chart



--- oil cooling
 - - - air cooling

1 Workpiece edge
 2 Workpiece center

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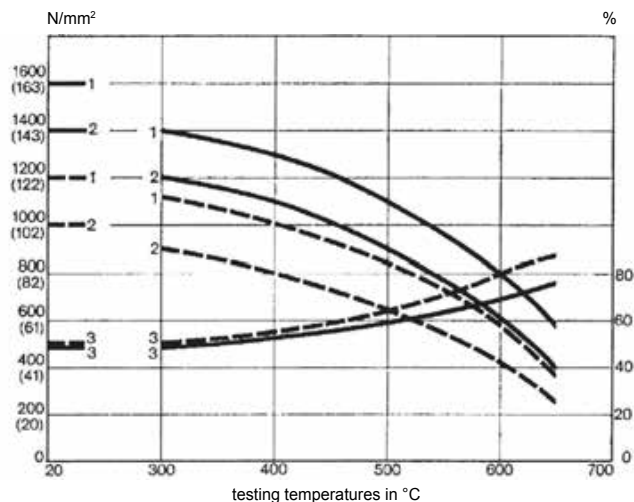
1.2343 X 37 CrMoV 5-1

1.2343ESU X 37 CrMoV 5-1 ESU

Chemical composition [%]

	C	Si	Mn	P	S	Cr	Mo	Ni	V
max.	0.41	1.2	0.50	0.03	0.02	5.5	1.5	0.21	0.5
min.	0.33	0.8	0.25			4.8	1.1		0.3

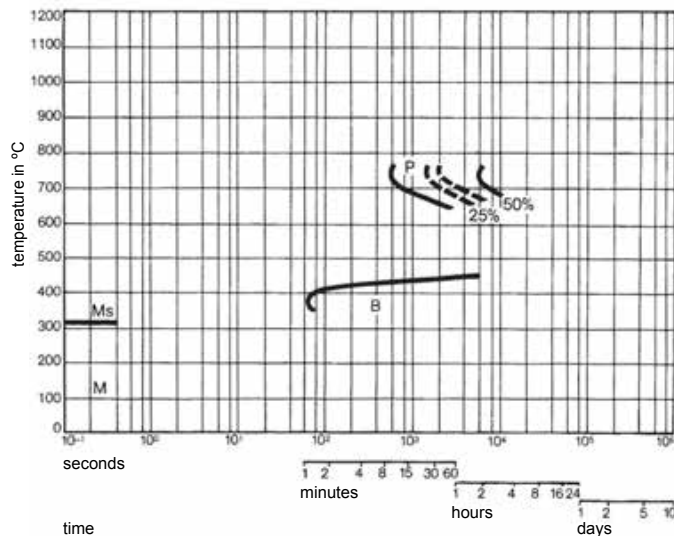
High-temperature strength diagram



- tempered 1600 MPa
- - - tempered 1200 MPa
- 1 tensile strength MPa (kp/mm²)
- 2 0,2-limit MPa (kp/mm²)
- 3 necking %

Isothermal transformation (TTT) diagram

Austenitization temperature: 1030°C, Holding time: 15 minutes



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