

*Block and board materials*

**ebablock<sup>®</sup> eboard eazell**

*Perfect in every shape*

*tooling resins blocks auxiliaries silicones*

**ebalta**

solution takes shape

## *Resins are our strength. Model, mould and tool making our passion.*

***ebalta** has been producing high-performance special resins for over 30 years. We have been particularly interested in model, mould and tool making from the very start. A separate business segment has arisen from our claim of developing bespoke solutions with the **ebalta** block and board materials **ebablock**<sup>®</sup>, **ebaboard** and **ebazell**. And with success: today **ebalta** is regarded as one of the most renowned companies in this sector – not least on account of the sophisticated service concept.*



### *Factor range of services: quality is more than just a good product*

Quality has many dimensions for us. The most important: completeness. Whether design, model or mould and tool making – the comprehensive range of **ebalta** boards and blocks is bound to offer you the suitable block and board material. Our matching additional products and project-related advice form the basis for perfect tools, moulds and models. Close cooperation with our customers is the keystone to a successful project. A continuous dialogue with the customer leads to an increasingly wide range of various materials that provide precisely the solution you have been looking for.

## *Each project is unique. And deserves comprehensive service.*

*The questions and problems are just as individual as the various fields of use. Advice, practical knowledge and complete service are indispensable for a perfect result. Which is why we have a worldwide distribution network to help you. From the initial advice and choice of materials right through to the project realisation.*

### *For perfect results: the requirements determine the material*

The features profile of the corresponding board and block materials differs depending on the requirements. **ebalta** has the right material for every job – tested to all quality standards and technically perfect. **ebalta** board and block materials are used in design model making, foundry pattern making as well as mould and tool making.

### *There when you need help: the sales agents of the **ebalta** distribution network*

No question that can't be answered, no process that can't be improved: our sales agents are there to help you with application and production engineering questions.

### *Content*

- **ebablock**<sup>®</sup>: The net-sized contour block for jointless models, moulds and tools ——— 4-7
- **ebaboard**: Boards for model, mould and tool making ————— 8-9
- **ebazell**: Design model making boards ——— 10
- Production auxiliaries and the little helpers from **ebalta**  
Repair pastes, fillers, adhesive ————— 6-10  
Additional products: release agents, pore sealers etc. ————— 11

### *Fast, guaranteed: worldwide distribution network*

**ebalta** will deliver your product quickly and reliably – including customer support, order assembly and shipping – so that you can concentrate on what's important to you: the model, mould or tool.





# **ebablock®**: the net-sized contour block material for jointless models, moulds and tools

Customized block material for easier and more precise machining: **ebablock®** provides you with an individually created product prefabricated exactly to your specifications. Our experts are happy to advise you from the choice of materials to the final model or tool.

## *A new technology for individual tasks*

**ebablock®** is produced in close cooperation with the customer. **ebablock®** is manufactured according to your individual geometries as either block goods or net-sized blanks. Block thicknesses of up to 500 mm are possible. Outstanding performance features include the excellent surface quality, resulting from the homogeneously cast and stress-free tempered blocks with no adhesive joints. We can offer different qualities depending on the requirements profile. Common features of all of these are the good mechanical properties, easy machinability and a fine microstructure.

## *Higher performance, point by point*

Each **ebablock®** makes models, moulds and tools more comfortable and efficient.

- You receive the block material to your specifications in individual sizes and geometries
- Models, moulds and tools are jointless
- Adhesive work and joints become a thing of the past
- The net-sized contour significantly reduces milling times

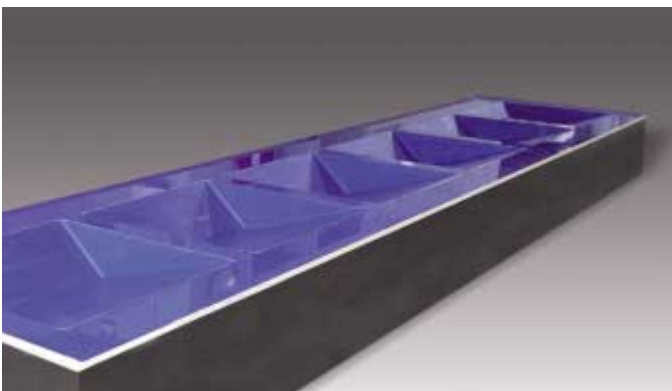
- Each **ebablock®** possesses outstanding dimensional stability
- Noticeable reduction in waste and refinishing
- No operating capital is tied up since no boards have to be stocked

Altogether these plus points add up to one thing for you: a higher quality in the production of models, moulds and tools.

## *High performance in customer support*

The **ebablock®** product series includes comprehensive customer support from your first contact with us to the completion of your job.

- We accompany your project from the beginning to end
- We submit you with a precise and individualised offer
- We create your **ebablock®** based on your specifications, regardless of whether you provide them as a CAD file or a sketch
- We manufacture the moulds you need
- We can also provide milling parameters and additional products for the optimum machining of the **ebablock®**



Blank for electroplating bath model of **ebablock® W mineral** (5700 x 1600 x 540 mm<sup>3</sup>)



Blank for cubing model of **ebablock® M 007** (3200 x 1600 x 420 mm<sup>3</sup>)

# Step by step to **ebablock**<sup>®</sup>

It's easy to receive your individually manufactured block material. We will ship your ready-to-machine **ebablock**<sup>®</sup>, depending on the complexity and volume of your order as quickly as possible.

## 1. Your order

You send us a drawing or CAD file with the specifications and dimensions for the **ebablock**<sup>®</sup> you require.

---



## 2. Mould making

We make a mould based on this data.

---



## 3. Mixing materials

We convert the raw material into a homogeneous mixture to meet your requirements 100%.

---



## 4. Casting the **ebablock**<sup>®</sup>

Then we cast your individual block material. The resin matrix is free from bubbles thanks to prior evacuation.

---



## 5. Postcuring the **ebablock**<sup>®</sup>

Once it has been cast, the **ebablock**<sup>®</sup> is postcured with an electronically controlled tempering process to rid the block of stresses and achieve optimal strength.

---



# ebablock®: the net-sized contour block material for jointless models, moulds and tools

ebablock® is tailored to your individual geometries as a net-sized blank – quickly and economically (saves material). We can offer different qualities depending on your particular requirements profile.

	ebablock® M 007	ebablock® K	ebablock® M 04
<b>Color</b>	brown, grey	salmon	yellow
<b>Applications</b>	Cubing models, master models, design models	Core boxes	Foundry patterns, pattern plates, core boxes
<b>Material properties</b>	dense surface, fine microstructure, very easy to machine	very abrasion resistant, very impact resistant, dense surface	very abrasion resistant, very impact resistant, good edge strength
Density at 20 °C [g/cm³]	0.80 ± 0.02	1.20 ± 0.02	1.20 ± 0.02
Delivery dimensions [mm]	Dimensions variable	Dimensions variable	Dimensions variable
<b>Physical Data</b>			
Flexural strength [MPa]	49 ± 4	n.a.	120 ± 5
Flexural modulus [MPa]	41 ± 4	n.a.	90 ± 5
Impact resistance (Charpy) [kJ/m²]	6 ± 1	n.a.	66 ± 9
Heat resistance (Martens) [°C]	65 ± 2	n.a.	78 ± 2
Shore hardness [Shore D]	73 ± 3	62 ± 3	84 ± 3
Coefficient of thermal expansion [10 <sup>-6</sup> K <sup>-1</sup> ]	approx. 60	approx. 163	approx. 77
	<b>Fast-curing model paste</b>	<b>Putty for ebablock® K</b>	<b>Casting resin M 04</b>
Mixing ratio (p. b. w.)	100 : 3	100 : 100	100 : 30
Pot life 200 g/20 °C [min.]	3-4	20-30	18-22
Curing time at RT [hrs.]	0.25-0.5	10-12	4-10

n.a.= not applicable



Milling of ebablock® M 007



ebablock® M 007 (3900 x 500 x 300 mm³)

## Best processing quality for a wide variety of uses

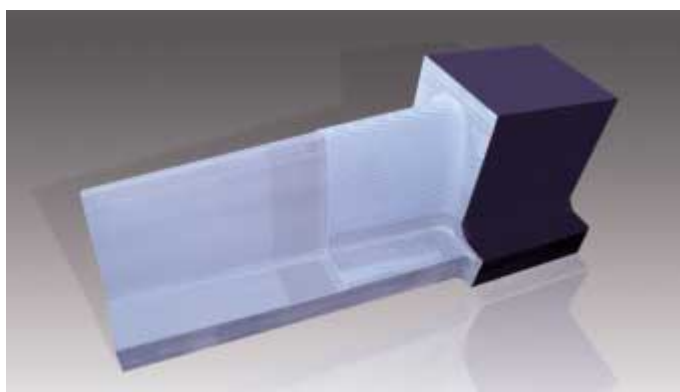
**ebablock®** is very versatile and can be quickly and easily processed. We will be pleased to provide adequate milling parameters for optimum machining.

<b>ebablock® 1200</b>	<b>ebablock® 140</b>	<b>ebablock® Alu</b>	<b>ebablock® W</b>	<b>ebablock® W mineral</b>
light beige	blue	alu-grey	grey	blue, beige
Gauges, jigs and fixtures, tools	Foundry patterns, core boxes, pattern plates	Vacuum forming moulds, data control models	Sheet metal forming tools, vacuum forming moulds, gauges	Electroplating bath models, gauges, pattern plates
low thermal expansion, good edge strength, high-quality surface	low thermal expansion, very abrasion resistant, fine microstructure	dense surface, low thermal expansion, very easy to machine	high strength, good sliding properties, low thermal expansion	low thermal expansion, high strength, easy to machine
1.25 ± 0.02	1.38 ± 0.03	1.65 ± 0.02	1.76 ± 0.03	1.76 ± 0.03
Dimensions variable	Dimensions variable	Dimensions variable	Dimensions variable	Dimensions variable
68 ± 2	109 ± 5	43 ± 4	100 ± 10	72 ± 8
80 ± 1.2	102 ± 5	52 ± 5	110 ± 10	110 ± 10
6.2 ± 0.4	19.5 ± 2	5 ± 0.5	8 ± 2	6 ± 1.5
85 ± 2	85 ± 3	90 ± 3	68 ± 2	70 ± 2
82 ± 2	85 ± 3	78 ± 2	90 ± 3	90 ± 3
approx. 58	approx. 65	approx. 70	approx. 50	approx. 39

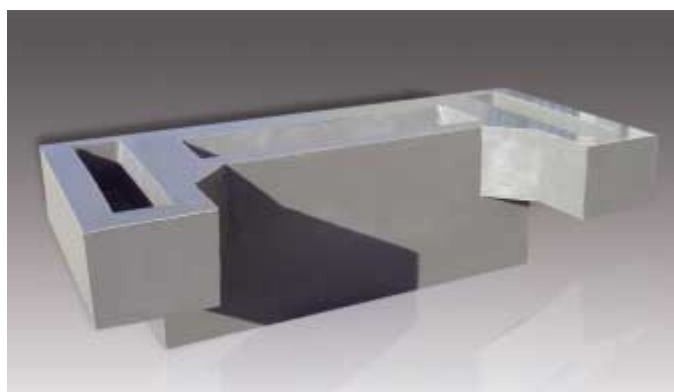
<b>ebalta-lastic</b>	<b>Casting system for eboard 140</b>	<b>Repair paste</b>	<b>ebalta-lastic</b>
100 : 3	100 : 30	100 : 1	100 : 3
5-15	18-22	5-15	5-15
0.25-0.5	4-10	0.25-0.5	0.25-0.5

All data is provided as non-committal information and contains no guarantee of certain features or properties of the products.

For **ebablock®** we supply adequate adhesive systems, too.



Electroplating bath model from **ebablock® W mineral** (1700 x 600 x 500 mm<sup>3</sup>)



Negative from **ebablock® Alu** (2200 x 1500 x 1100 mm<sup>3</sup>)

# ebaboard: Boards for model, mould and tool making

The **ebaboard** product series comprises boards that are available in various thicknesses depending on the requirements. **ebaboard** products have many advantages: dimensional accuracy and stability, durability and highly stable edges. Your benefit through superb machinability and very little dust build-up.

	<b>ebaboard L</b>	<b>ebaboard 60</b>	<b>ebaboard S</b>	<b>ebaboard M 04</b>
<b>Color</b>	ochre	red brown	red brown	yellow
<b>Applications</b>	Master models, design models, laminating moulds	Master models, design models, foundry patterns	Master models, foundry patterns, design models	Foundry patterns, pattern plates, core boxes
<b>Material properties</b>	very easy to machine, good edge strength, good compressive strength	dense surface, fine microstructure, very easy to machine	dense surface, fine microstructure, very easy to machine	very abrasion resistant, very impact resistant, good edge strength
Density at 20 °C [g/cm <sup>3</sup> ]	0.45 ± 0.02	0.65 ± 0.02	0.70 ± 0.02	1.20 ± 0.02
Delivery dimensions [mm]	1500 x 500 x 50 1500 x 500 x 100 1500 x 500 x 200	1500 x 500 x 25 1500 x 500 x 50 1500 x 500 x 75 1500 x 500 x 100 1500 x 500 x 200	1500 x 500 x 25 1500 x 500 x 50 1500 x 500 x 75 1500 x 500 x 100 1500 x 500 x 150 1500 x 500 x 200	1000 x 500 x 50 1000 x 500 x 75 1000 x 500 x 100
<b>Physical Data</b>				
Flexural strength [MPa]	10 ± 2	17 ± 3	25 ± 3	120 ± 5
Flexural modulus [MPa]	10 ± 2	17 ± 3	24 ± 3	90 ± 5
Impact resistance (Charpy) [kJ/m <sup>2</sup> ]	2.5 ± 1	5 ± 1	6 ± 1	66 ± 9
Heat resistance (Martens) [°C]	65 ± 5	45 ± 2	50 ± 2	78 ± 2
Shore hardness [Shore D]	45 ± 2	62 ± 3	65 ± 3	84 ± 3
Coefficient of thermal expansion [10 <sup>-6</sup> K <sup>-1</sup> ]	approx. 40-60	approx. 50	approx. 55	approx. 77

<b>Adhesive</b>	<b>Adhesive for boards</b>	<b>Adhesive for M 04</b>
Mixing ratio (p. b. w.)	100 : 53	100 : 28
Pot life 100 g/20 °C [min.]	5-7	18-22
Curing time at RT [hrs.]	3-4	4-10

<b>Fillers and repair pastes</b>	<b>Putty for ebaboard L</b>	<b>Fast-curing model paste</b>	<b>Casting resin M 04</b>
Mixing ratio (p. b. w.)	100 : 3	100 : 3	100 : 30
Pot life 200 g/20 °C [min.]	4-6	3-4	18-22
Curing time at RT [hrs.]	0.25-0.5	0.25-0.5	4-10



## Proven quality for a wide variety of requirements

**ebaboard** products are available in various densities and surface structures. It doesn't matter what the requirements are – the **ebaboard** range of products has the right material for any job. We will be pleased to provide the relevant milling parameters depending on the material for optimum machining.

<b>ebaboard 1200</b>	<b>ebaboard PW 920</b>	<b>ebaboard 140</b>	<b>ebaboard LX</b>	<b>ebaboard W</b>
light beige	green	blue	beige	grey
Gauges, jigs and fixtures, tools	Foundry patterns, core boxes, pattern plates	Foundry patterns, core boxes, pattern plates	Gauges, jigs and fixtures, tools	Sheet metal forming tools, vacuum forming moulds, gauges
low thermal expansion, good edge stability, high-quality surface	good edge strength, high-quality surface, easy to machine	low thermal expansion, very abrasion resistant, fine microstructure	low thermal expansion, good edge strength, high-quality surface	high strength, good sliding properties, low thermal expansion
1.20 ± 0.05	1.21 ± 0.05	1.38 ± 0.03	1.72 ± 0.05	1.76 ± 0.03
1000 x 500 x 50 1000 x 500 x 100	1000 x 500 x 30 1000 x 500 x 50 1000 x 500 x 75 1000 x 500 x 100	1000 x 500 x 50 1000 x 500 x 75 1000 x 500 x 100	1000 x 500 x 50 1000 x 500 x 100	1000 x 500 x 50 1000 x 500 x 75 1000 x 500 x 100
70 ± 5	72 ± 5	109 ± 5	77 ± 5	100 ± 10
75 ± 5	56 ± 5	102 ± 5	115 ± 10	110 ± 10
7.6 ± 2	25 ± 3	19.5 ± 2	3.7 ± 1	8 ± 2
84 ± 3	62 ± 2	85 ± 3	75 ± 3	68 ± 2
82 ± 2	79 ± 2	85 ± 3	90 ± 3	90 ± 3
approx. 62	approx. 109	approx. 65	approx. 44	approx. 50

<b>Adhesive for boards</b>	<b>Adhesive for ebaboard 140</b>	<b>Adhesive for boards</b>	<b>Adhesive for alu boards slow / fast</b>
100 : 53	100 : 28	100 : 53	100 : 15 / 100 : 10
5-7	18-22	5-7	45-60 / 15-25
3-4	4-10	3-4	5 / 2

<b>ebalta-lastic</b>	<b>Putty for ebaboard PW 920</b>	<b>Casting system for ebaboard 140</b>	<b>ebalta-lastic</b>	<b>Repair paste</b>
100 : 3	100 : 2	100 : 30	100 : 3	100 : 1
5-15	4-6	18-22	5-15	5-15
0.25-0.5	0.25-0.5	4-10	0.25-0.5	0.25-0.5

All data is provided as non-committal information and contains no guarantee of certain features or properties of the products.

## ebazell: Design model making boards

The **ebazell** range of products has proven particularly successful in design model making. The lightweight boards are primarily characterised by their fine microstructure and excellent machinability. Minimum formation of dust during machining. Milling parameters are also available for **ebazell**.

	<b>ebazell 50</b>	<b>ebazell 80</b>	<b>ebazell 160</b>	<b>ebazell 260</b>
<b>Color</b>	light beige	light beige	light green	light grey
<b>Applications</b>	Styling models, negatives, substructures	Styling models, master models, design models	Master models, design models, handicrafts	Master models, design models, handicrafts
<b>Material properties</b>	very low weight, very easy to machine	fine microstructure, very easy to machine	very fine microstructure, very easy to machine	very fine microstructure, very easy to machine, dimensional accuracy
Density at 20 °C [g/cm <sup>3</sup> ]	approx. 0.05	approx. 0.08	approx. 0.16	approx. 0.25
Delivery dimensions [mm]	2000 x 1000 x 100 2000 x 1000 x 150 2000 x 1000 x 200 Further boards can be supplied in 50 mm steps up to 600 mm	2000 x 1250 x 100 2000 x 1250 x 200 2000 x 1250 x 300 2000 x 1250 x 400 Further dimensions on request	2000 x 1000 x 100 2000 x 1000 x 150 2000 x 1000 x 200 2000 x 1000 x 300 2000 x 1000 x 400 Further dimensions on request	2000 x 1000 x 50 2000 x 1000 x 100 2000 x 1000 x 150 2000 x 1000 x 200 Further dimensions on request
<b>Physical Data</b>				
Flexural strength [MPa]	0.40	0.86	2.6	4.8
Coefficient of thermal expansion [10 <sup>-6</sup> K <sup>-1</sup> ]	approx. 60	approx. 58	approx. 57	approx. 57

	<b>Adhesive for ebazell boards</b>
Mixing ratio (p. b. w.)	100 : 64
Pot life 100 g/20 °C [min.]	15-20
Curing time at RT [hrs.]	3-4



Negative of **ebazell 80** (8000 x 2000 x 1000mm<sup>3</sup>), multi-part  
Picture credits: Senckenberg-Museum, Frankfurt

Negative of **ebazell 50** (4200 x 700 x 400mm<sup>3</sup>)

## Production auxiliaries and the little helpers from **ebalta**

**ebalta** offers a complete range of various auxiliaries for all phases of work with **ebablock®**, **ebaboard** and **ebazell**. Developed specially for **ebalta** materials, this multi-faceted spectrum of little helpers makes it as easy as possible for you to handle our products.

<i>Release agent T 1-1</i> <i>Release agent T 03-1</i>	For release of component surfaces	Very short drying time High temperature resistance
<i>Pore sealer</i>	Primer for sealing porous surfaces (wood, plaster), creates highly smooth surfaces	Fast drying Apply with brush or spray
<i>Primer G1 for ebazell boards</i>	One-component system for the adhesive priming of <b>ebaboard</b> and <b>ebazell</b>	Good curing Easy to process
<i>Wax sheets</i>	Normal and thermostable sheets, various types available in different thicknesses	Fast and easy handling Adhesive-backed
<i>Brushes</i>		
Flat brushes	10 / 20 / 30 mm	
Gussow brush	12 mm	
Gussow bristle brush	20 mm	
<i>Gloves</i>		
Latex glove with / without powder	S / M / L / XL	
Vinyl gloves without powder	S / M / L / XL	
Nitrile gloves without powder	M / L / XL	
Cotton gloves	One size fits all	
<i>Mixing cups</i>		
Plastic mixing cup	350 / 860 / 2100 ml	
Cardboard mixing cup	Small / Large	
<i>Adhesives</i>		
Dries-in-seconds adhesive AD 51	20 g bottle	
Spray adhesive	400 ml can	

Please contact us if you cannot find the product you are looking for. Other production auxiliaries can be found in our brochure „The little helpers from **ebalta**“.

We will be pleased to provide the material-dependent milling parameters of **ebablock®**, **ebaboard** and **ebazell**.

*tooling resins   blocks   auxiliaries   silicones*

*Design model making*

*Foundry tooling*

*Mould and tool making*

*Rapid Prototyping*

*Composites*

*Sheet metal forming*

*Electrical encapsulation*

*Further applications*

*If you have any questions concerning technical and production help, please call us anytime to make an appointment with our experts.  
We are looking forward to you!*

**ebalta** Kunststoff GmbH  
Erlbacher Straße 100  
91541 Rothenburg ob der Tauber  
Germany

Tel.: +49 9861 7007-0  
Fax: +49 9861 7007-77  
info@ebalta.de  
[www.ebalta.de](http://www.ebalta.de)

**ebalta**  
solution takes shape