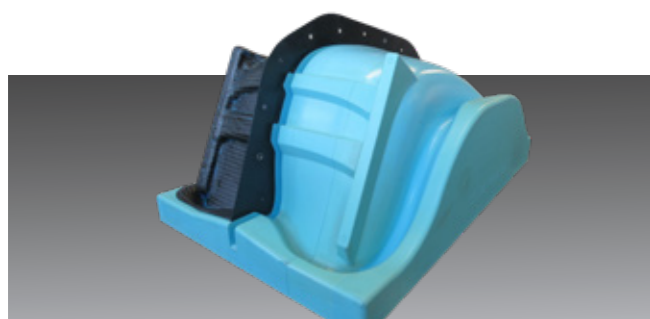


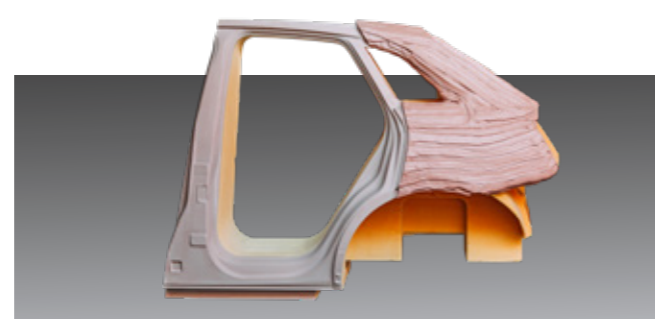
ebalta boards, blocks and lay-up paste for mould making. Market leader quality for each geometry.

We've been supporting model and tool makers as well as foundry pattern makers with innovative products for over 40 years. Our board and block materials and our lay-up pastes are especially developed for the requirements of your geometries.

Boards/Blocks/ Lay-up paste	ebaboard L-2	ebaboard 0700	ebaboard EP 138	ebablock® P 185	Lay-up paste P 26
Colour	apricot	brown	light blue	blue	red brown light grey
Density at 20 °C [g/cm³]	0.45	0.70	0.68	1.86	0.75
Applications	Master models, design models, laminating models	Master models, design models, foundry patterns	Prepreg tooling, master models for prepreg tooling	Master models for prepreg and nickel shell tools, tools for low temperature prepregs	Master models for big laminating tools and design models for automotive, aircraft, boat building and wind energy
Properties	PU board very fine structure, good edge stability, good compressive strength	PU board dense surface, very fine structure, very well workable	EP board low coefficient of thermal expansion, very high heat resistance, very fine surface structure	PU block material low thermal expansion, high heat resistance, big volume blocks available	EP lay-up paste 10 - 35 mm layer possible in one step, low exothermic, dimensionally stable
Coefficient of thermal expansion 20-50 °C [10⁻⁶K⁻¹]	approx. 65	approx. 49	approx. 36	approx. 39	approx. 65
Heat resistance HDT [°C]	67 ± 2	78 ± 3	145 ± 3	115 ± 5	72 ± 3
Sales units	1500 x 500 x 50 mm 1500 x 500 x 75 mm 1500 x 500 x 100 mm 1500 x 500 x 150 mm 1500 x 500 x 200 mm	1500 x 500 x 30 mm 1500 x 500 x 50 mm 1500 x 500 x 75 mm 1500 x 500 x 100 mm 1500 x 500 x 150 mm 1500 x 500 x 200 mm	1524 x 609 x 50 mm 1524 x 609 x 75 mm 1524 x 609 x 100 mm 1524 x 609 x 150 mm	ebablock®: individual dimensions	30 kg 130 kg
Adhesive, repair putty and casting resins	Adhesive apricot	Adhesive and repair putty brown	Adhesive 552	Adhesive and putty P 185 blue	Repair putty P 26



Prepreg tooling made of EP 138



Original size design model made of lay-up paste P 26

High-performance Epoxy Resins For your strongest ideas

ebalta epoxy resin systems for composites have been especially developed for the manufacture of high-strength components reinforced with glass and carbon fibres. They are used, for example, in high-tech fields such as racing, boatbuilding, the automotive industry, rail vehicle construction and wind turbines.

Temperature range	up to 80 °C			up to 100 °C				up to 120 °C		up to 180 °C	up to 200 °C								
	IP 25	AH 150 IP 55	IP 430	LH 25 LH 25	AH 120 TL-1	SR	TGL	AH 140 LI 20-1	LI 130-2	AH 140 TC 60	TC 90-2	LH 28-1 TM	LH 30 LH 30						
Resin																			
Hardener																			
Mixing ratio (p.b.w.)	100:30			100:15				100:25		100:22		100:35							
Pot life approx. [min] 200 g (20 °C)	15-25	50-60	300-430	50-60	80-90	13-15	55-65	18-22	120-140	55-65	90-105	240-360	160-200						
Mixing viscosity [mPas] (25 °C)	550 ± 80	350 ± 80	250 ± 50	950 ± 100	430 ± 80	1850 ± 200	1000 ± 150	600 ± 75	550 ± 75	600 ± 75	425 ± 75	750 ± 100	2200 ± 500						
Glass transition temperature T_g approx. [°C] after curing	80 (HDT)	78 (HDT)	79 (HDT)	89 (90 HDT)	100 (HDT)	100 (94 HDT)	102 (101 HDT)	83 (91 HDT*)	100 (107 HDT*)	93 (97 HDT)	114 (110 HDT*)	182 (175 HDT)	200 (181 HDT)						
Curing [h / °C]	3-5 / 80	3-5 / 80	3-5 / 80	12-16 / 80	6-8 / 50-60 + 3-5 / 80-90	12 / 80	12 / 80	4 / 60 + 6-8 / 80	4 / 60 + 6 / 80 + 4 / 120	4-6 / 60 + 5-6 / 80	4-6 / 60 + 5-6 / 80	Gradual post curing up to 160°C	Gradual post curing up to 150°C						
Properties and applications	<ul style="list-style-type: none"> • Infusion and laminating resin for components and moulds for the automotive industry, aerospace or boatbuilding • Low viscosity, good fibre wetting, long flow paths, adjustable potlife • economically priced 			<ul style="list-style-type: none"> • Flameproof laminating resin for precision components according to DIN 5510-2 				<ul style="list-style-type: none"> • High strength 		<ul style="list-style-type: none"> • High-strength laminating resin • Bonding resin for fillers • Hardener SR and TGL also cure well at room temperature 		<ul style="list-style-type: none"> • Cures tack free • Vacuum infusion of carbon- and glass fibre parts • Hand lay-up of carbon- and glass fibre parts 		<ul style="list-style-type: none"> • Temperature resistant, low-viscosity system e.g. carbon fibre visible parts • With hardener TC 60 also cures well at room temperature 		<ul style="list-style-type: none"> • High-temperature resistant infusion and laminating resin for components and moulds 		<ul style="list-style-type: none"> • High-temperature resistant laminating and bonding resin for moulds 	

*at additional post curing within 4h / 120 °C

Resin/Hardener	OH 4/CH-3	OH 35/CH-3	OH 6-1/CH-3	OH 30/Harz+Härter	OH 82/TM
Mixing ration (p.b.w.)	100 : 17	100 : 18	100 : 11,5	100 : 20	100 : 31
Pot life approx. [min] 200 g (20 °C)	15-20	20-25	20-25	160-200	220-260
Heat resistance (HDT)	85 ± 3	94 ± 3	97 ± 3	> 170	175 ± 5
Post curing [h / °C]	24/RT + 8 / 80	24 / RT + 8 / 80	24 / RT + 8 / 80	4 - 6 / 40 + 4 - 6 / 60 + 4 - 6 / 100 + 4 - 6 / 150	16 / 60 + 8 / 130 + 4 / 160
Properties and applications	multi purpose useable, negatives	polishable, vacuum forming tools	very abrasion resistant, Polyester hand lay-up moulds	very high heat resistance, prepreg tools	very high heat resistance, prepreg tools

Bezeichnung		ebaboard S-1	
Farbe		rotbraun	
Anwendungen	<ul style="list-style-type: none"> • Urmodelle • Gießformmodelle • Vakuumfaserform (Kleinserien) • PU-Schäumformen (Kleinserien) • Temperstrichen • Designmodelle • Anschauungsmodelle 	Materialeigenschaften	<ul style="list-style-type: none"> • sehr feines Gefüge • hohe Festigkeitswerte • sehr gute Kantensabilität • hohe Wärmeformbeständigkeit • gute Lösefahrigkeit • sehr gut bearbeitbar (enthält keine abrasiven Füllstoffe)
Verarbeitungsdaten			
Produkt	ebaboard S-1		
Farbe	rotbraun		

Roding Roadster R1 made with AH 140

From: Roding Automobile GmbH



Roding CFK-chassis made of AH 140 from vacuum infusion



Additives and ancillary equipment	Glass and carbon fibres		Release agents and sealer	
	Stapel fibre cloth thin, middle, thick	170 g/m², 280 g/m², 400 g/m², fast build-up of big laminate thicknesses	T 1-1	liquid, fast drying, polishable, also available as spray
Glass filament fabrics thin, middle, thick	163 g/m², 280 g/m², 445 g/m², 600 g/m², high strength	T 03-1	liquid, heat resistant	
Carbon fibres	160 g/m², 200 g/m², 245 g/m²	T 7	pasty, well polishable, heat resistant up to 80 °C	
Ancillary materials for vacuum infusion	peel ply, flow medium, Sealing tape, vacuum bagging film, spiral tubings	Release agent 17	Semi-permanent release agent for multiple demoulding, high-temperature resistant	
Synthetic gypsum	ebacryl-laminating system, Ludur XL	Sealer 02 Sealer 09	Sealing of EP and PU Board materials, heat resistance over 200°C	



Our Product Manager Stefan Koppmair is your expert for Composites and fabrication of moulds and parts. In addition we offer in-house training on vacuum infusion.

Please feel free to contact Stefan Koppmair directly:
mobile: + 49 171 7 99 81 54
e-mail: skoppmair@ebalta.de

ebablock® P 185. The individual cast-to-size block for your prepreg and electroformed nickel shell master models.

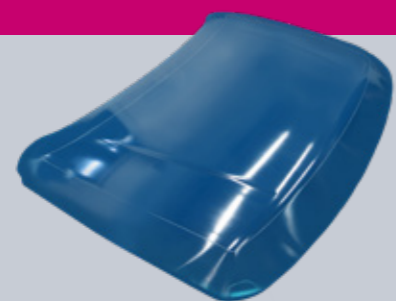
ebalta composites resins.

The high-performance programm for tooling, prepregs and parts.

Polyurethane and Epoxy Resins Boards and Blocks Silicones Auxiliaries

Our international distributors

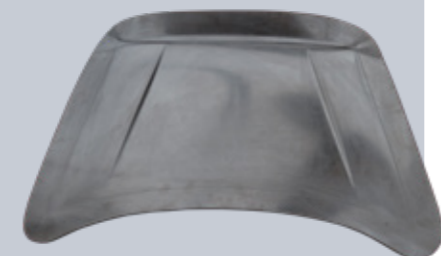
Product	ebablock® P 185
Colour	blue
Applications	Master models for prepreg tools Master models for nickel shell tools Tools for low tempature prepregs Moulding tools
Properties	Polyurethane block material Low thermal expansion High heat resistance Big volume blocks available Very dense surface Self-extinguishing according to UL 94 V0, FileE191776
Sales units	Individual cast-to-size block material with variable dimensions. Application example: Master model for a prepreg tool of a turbine engine cowling. Size: 3760 x 2990 x 1640 mm Volume: 3000 litres
Physical data	
Density at 20 °C (g/cm³)	1.86 ± 0.05
Shore hardness D	90 ± 3
Flexural strength (MPa)	70 ± 5
Flexural modulus (MPa)	11350 ± 200
Compressive strength (MPa)	120 ± 5
Impact resistance (Charpy) (kJ/m²)	3 ± 0.5
Heat resistance (HDT) (°C)	115 ± 5
Coefficient of thermal expansion 20 - 50°C (10-6K-1)	approx. 39



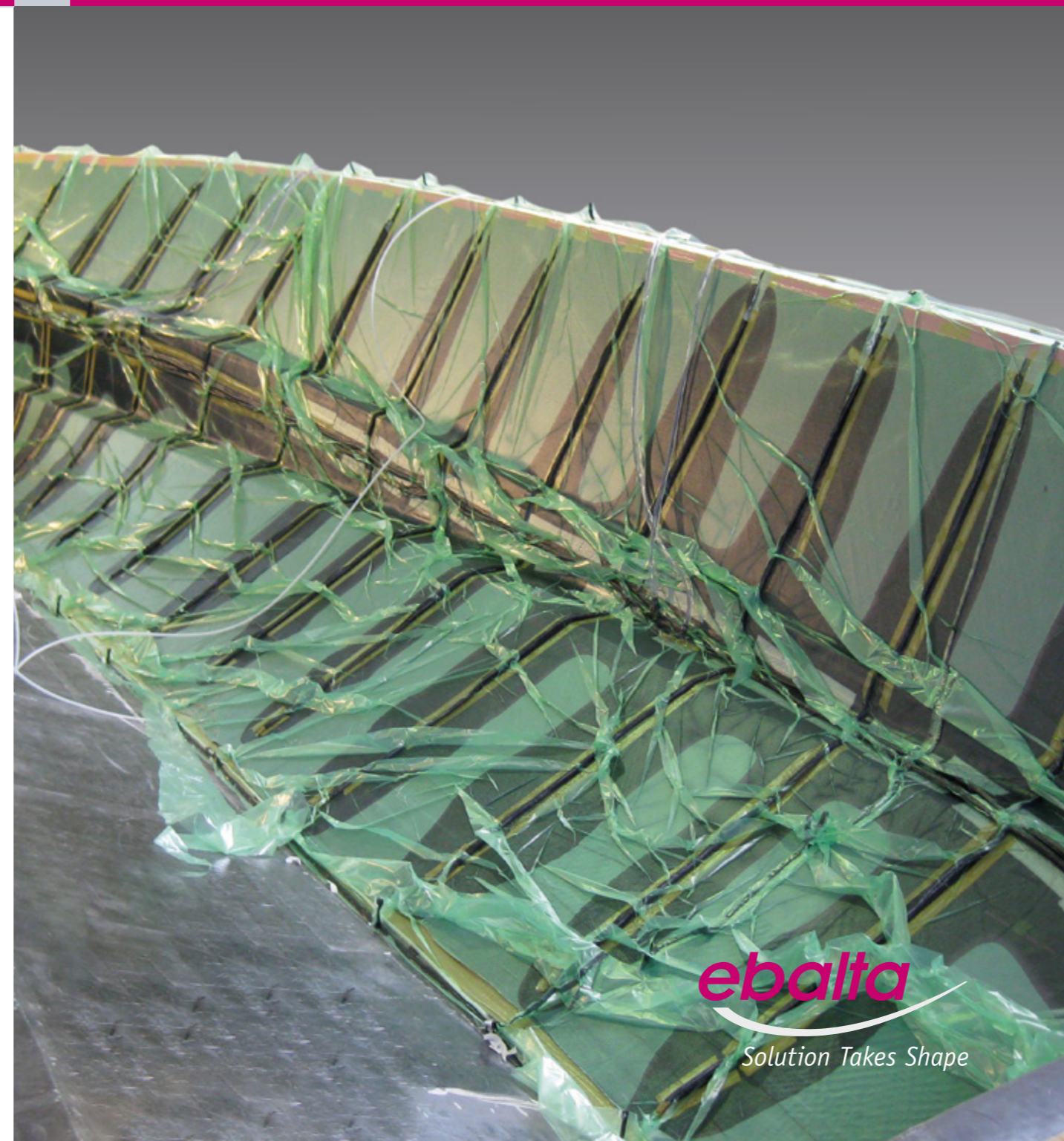
Master model made of ebablock® P 185



Nickel shell tool produced on ebablock® P 185



Prepreg tool produced on ebablock® P 185



Argentina
NOVARCHEM S.A.
Gral. Lavalle 5168,
Villa Martelli (1603),
Buenos Aires
Phone +54 11 47 09 75 85
E-Mail info@novarchem.com.ar

Australia
LMW Products & Services
PO Box 1255
Mitcham North
Victoria 3132
Phone +61 4 03 53 52 97
E-Mail wolfgang@lmwproducts.com.au

Austria / Croatia / Slovenia
FDW Handelsges. m.b.H.
8940 Liezen/Stmk.
Phone +43 3 61 22 55 75
E-Mail fdw@aon.at

Bulgaria
Hofmann Consult Bulgaria EOOD
Okolovrasten pat 66, 1415 Sofia
Phone +359 2 9 60 90 10
E-Mail office@hofmannconsult.net

Czech Republic
KTK Blansko, spol s r.o.
67907 Kotvrdovice 277
Phone +42 0 51 64 43 57 2
E-Mail trubackova@ebalta.cz

France
Bodo Möller Chemie France SAS
69250 Neuville Sur Saone
Phone +33 4 78 98 23 37
E-Mail m.sempere@bm-chemie.fr

Delta Résines
77950 Montereau Sur Le Jard
Mobile +33 6 01 35 30 32
E-Mail delta.resines@orange.fr

India
Electrocoating & Insulation Technologies Pvt.Ltd.
Hinjawadi, Pune 411057
Phone +91 20 22 93 32 35 / 22 93 31 37
E-Mail d.deshmukh@electrocoats.com

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

Phone: +49 9861 7007-0
Fax : +49 9861 7007-77
info@ebalta.de
www.ebalta.de

Indonesia
PT. TRIPURI MITRA NOBELINDO
Jakarta 11520
Phone +62 21 58 05 90 6
E-Mail samudra@tripuri.co.id

Italy
CAME S.r.l
Chemical and Mineral Engineering
Via Lepetit, 40, 20020 Lainate (MI)
Phone +39 02 96 44 65 20
E-Mail info@comesrl.eu

Roman Nello di Bocca
R. & Roman D. & C S.A.S.
C.so Novara 60/c
27029 Vigevano (PV)
Phone +39 0 38 12 38 53
E-Mail info@romanello.it
Area: shoe industry

The Netherlands
James Kunststof
7213 VW Gorssel
Phone +31 575 49 07 87
E-Mail paz35@hetnet.nl

Norway
Hans Clausen AS
Skuiveien 41
1339 Voyenenga
Phone +47 671 19 400
E-Mail jonas.clausen@hc-as.no

People's Republic of China
EPTEK Tooling Materials (Shanghai) Co. Ltd.
Shanghai 201315
Mobile +86 18 61 63 39 45 6
E-Mail ocean@eptek.com

Shanghai Rocsky Trading Co. Ltd.
Electronic Equipment Co.Ltd.
Shanghai 201612
Phone +86 21 64 78 95 85
E-Mail groundjun@aliyun.com

Poland
Prec-Odlew Sp. z o.o.
32-050 Skawina
Phone +48 1 22 76 49 95
E-Mail prec@odlew.com.pl

Russia
LLC STANKI.RU Co.
107023 Moscow
Phone +7 495 7 81 55 11
E-Mail kami@stanki.ru

Republic of South Africa
Speciality Polymers S.A. (PTY) Ltd
Cape Town 7530
Phone +27 0 83 4 57 24 68
E-Mail gkoen@iafrica.com

Spain / Portugal
UNECO S.A.
08769 Castellvi de Rosanes Barcelona
Phone +34 93 3 83 47 11
E-Mail uneco@uneco.es

Sweden
ABIC Kemi AB
60006 Norrköping
Phone +46 11 14 90 30
E-Mail info@abic.se

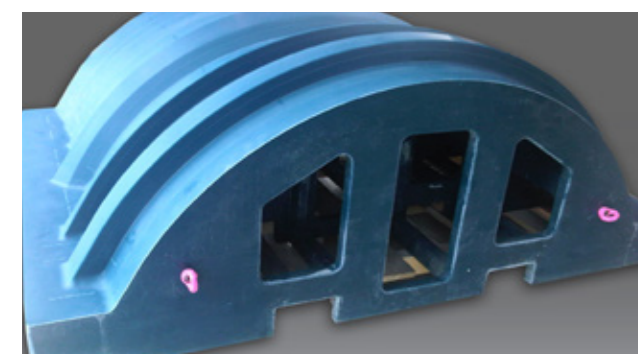
Switzerland
Langer AG
4105 Biel-Benken
Phone +41 61 4 82 34 32
E-Mail info@langerag.ch

Tunisia / Algeria
ADCHEM
Advanced Chemistry S.A.R.L.
Immeuble Anbar N° 168 Avenue de Kouwait
Hammemet - 8050 Tunis
Tunisia
Phone +2 16 93 61 90 19
E-Mail business.manager@advanced-chemistry.com

Turkey
Epoks Kimyevi Ürünler San. Tic. Ltd. Sti.
34212 Günesli / Bagcilar-ISTANBUL
Phone +90 21 24 74 87 48
E-Mail ali.kayalar@epoks.com.tr

United Kingdom
ebalta Distribution Limited
Arundel, West Sussex, BN18 OHY
Phone +44 77 85 57 36 12
E-Mail info@ebaltdistribution.co.uk

Download composites brochure



Master model for prepreg tool made of ebablock® P 185. Size: 3760 x 2990 x 1640 mm, volume: 3000 litres

