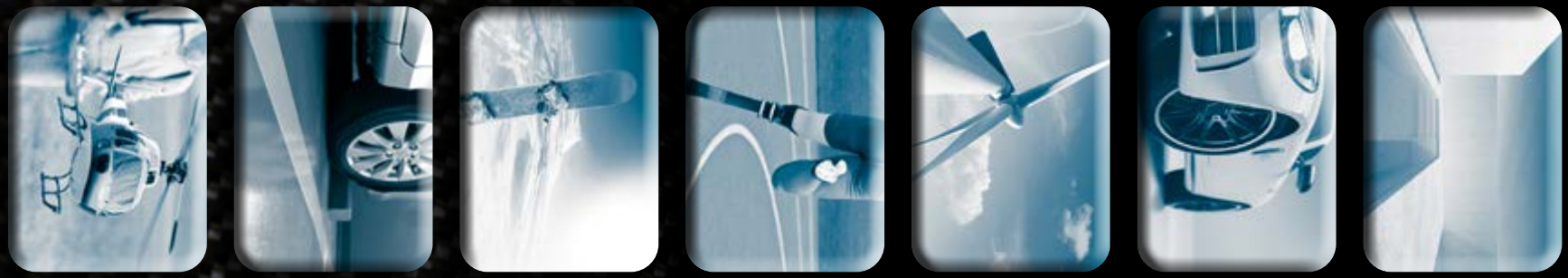

Product Assortment

2025

HP-Textiles

About Us

Since the company foundationin in 2004, we have been involved in the development and distribution of fiber composite materials. In addition to a variety of fiber reinforcement materials, epoxy resins, as well as many individual vacuum and accessories complete innovative products our product portfolio.

Already today include more than 40,000 satisfied users from the fields pond building, container construction, aerospace and automotive industry, model construction, motor sports and sports equipment as well as wind energy and ship building to our customers.

To the long term to ensure a consistent high quality of our services, as well as optimal process reliability our business partners, the quality management of the company HP-Textiles GmbH in 2011 was 9001 to DIN EN ISO certified.

The enthusiasm and passion for scientific research, coupled with the understanding of our customers‘ guarantee in the future constantly new, improved products.

Together with partners from science and industry, we also offer the custom synthesis and manufacturing of various products.
The construction of a networked, cross-company development also allows us shortly to respond to customer requests. Variable batch sizes enable us to supply of large industrial customers to small quantities for project developments.

Our young qualified team, a large warehouse, and reliable logistics partner enabling this rapid processing of your order.

The continuous development of the range should continue to be a basic requirement to ensure optimal component properties at competitive prices! We combine sustainable technologies and innovative approaches to actively contribute to environmental protection. With solar power, e-mobility, recycled materials and the promotion of ecological diversity, we are committed to a resource-conserving and environmentally friendly future.

Your team from
HP-Textiles GmbH

Prices and availability can be found in the online shop at www.hp-textiles.com

Or simply scan the the QR code

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GLASS FIBRE SLEEVES

CARBONFABRICS
GLASS NON WOVEN
ARAMIDFABRICS
GLASS FILAMENT FABRICS
TWILL
ATLAS 1/4
DESIGNFABRICS
HYBRIDFABRICS
GLASSFIBRE
MULTIAXIAL GLASS FABRICS
FLAT BRAID
PLAIN
MULTIAXIAL CARBON FABRICS

Carbon Fibre Fabrics

Carbon fibres have versatile properties. The main motive for the development of carbon fibres has come from the aerospace industry with its need for a material with a combination of high strength, high stiffness and low weight.

These high-tenacity (HT) fibres provide excellently balanced mechanical laminate properties.

Without carbon fibres many constructive solutions for aerospace would never have been possible. In the energy industry, these reinforcing fibres are used to the realization of wind turbines and fuel cell technology for high-pressure gas tank and gas diffusion, used for oil exploration in risers and for the reprocessing of nuclear fuel in a centrifuge. In medical technology, there are carbon-fiber back into Xray tables, prostheses and fixators. Industrial applications include rollers for the paper and printing industries, as well as optical and structural components in the automotive industry. For applications in the area of leisure are sports equipment (tennis racket, golf club shafts, bicycle frames, masts for sailing boats, surfboards, helmets, fishing rods) and musical instruments

The potential applications of carbon fibres are very diverse!

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARN TYPE Weft Tex	THICKNESS mm
HP-P68C*	68	Plain	**5,0 x 5,0**	1K-67	1K-67	0,10
HP-P80C	80	Plain	**6,0 x 6,0**	1K-67	1K-67	0,12
HP-P96C	93	Plain	**7,0 x 7,0**	1K-67	1K-67	0,13
HP-P120C*	120	Plain	**9,0 x 9,0**	1K-67	1K-67	0,16
HP-S120C*	120	Atlas 1/4	**9,0 x 9,0**	1K-67	1K-67	0,16
HP-T150C*	150	Twill 2/2	**12,0 x 10,0**	1K-67	1K-67	0,20
HP-P160C	160	Plain	**4,0 x 4,0**	3K-200	3K-200	0,27
HP-T160C	160	Twill 2/2	**4,0 x 4,0**	3K-200	3K-200	0,30
HP-P195C	195	Plain	**4,8 x 4,8**	3K-200	3K-200	0,30
HP-T195C	195	Twill 2/2	**4,8 x 4,8**	3K-200	3K-200	0,30
HP-P200C	200	Plain	**5,0 x 5,0**	3K-200	3K-200	0,30
HP-P200/0250C	200	Plain	**5,0 x 5,0**	3K-200	3K-200	0,30
HP-T200C	200	Twill 2/2	**5,0 x 5,0**	3K-200	3K-200	0,32
HP-U215C Thermoplast fixation	215	UD	**2,5 x 1,6**	12K-800	E-Glass Hotmelt	0,2
HP-T217C*	217	x-Twill 3/1	**5,2 x 5,2**	3K-200	3K-200	0,32
HP-T240C	245	Twill 2/2	**6,0 x 6,0**	3K-200	3K-200	0,35
HP-T240CE EP-Binder	245	Twill 2/2	**6,0 x 6,0**	3K-200	3K-200	0,35
HP-P250C*	250	Plain	**6,0 x 6,25**	3K-200	3K-200	0,33
HP-P285C*	285	Plain	**7,0 x 7,0**	3K-200	3K-200	0,38
HP-T285C*	285	Twill 2/2	**7,0 x 7,0**	3K-200	3K-200	0,43
HP-T286C	285	Twill 4/4	**7,0 x 7,0**	3K-200	3K-200	0,43
HP-S285C*	285	Atlas 1/4	**7,0 x 7,0**	3K-200	3K-200	0,45
HP-T287C*	285	Twill 2/2	**3,5 x 3,5**	6K-400	6K-400	0,47
HP-P300C*	300	Plain	**3,7 x 3,7**	6K-400	6K-400	0,42
HP-U315C Thermoplast fixation	315	UD	**3,65 x 1,6**	12K-800	E-Glass Hotmelt	0,3
HP-T370C*	370	x-Twill 3/1	**4,6 x 4,6**	6K-400	6K-400	0,61
HP-S372C*	370	Atlas 1/4	**2,3 x 2,3**	12K-800	12K-800	0,61
HP-P375C*	375	Plain	**2,3 x 2,3**	12K-800	12K-800	0,63

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARNTYPE Weft Tex	THICKNESS mm
HP-T400C*	400	x-Twill 3/1	**5,0 x 5,0**	6K-400	6K-400	0,60
HP-P400C	400	Plain	**2,5 x 2,5**	12K-800	12K-800	0,64
HP-T421C	420	Twill 2/2	**2,6 x 2,6**	12K-800	12K-800	0,64
HP-P460C*	460	Plain	**2,8 x 2,8**	12K-800	12K-800	0,70
HP-T460C*	460	Twill 2/2	**2,8 x 2,8**	12K-800	12K-800	0,73
HP-P600C*	600	Plain	**3,7 x 3,7**	12K-800	12K-800	0,85
HP-T600C	600	Twill 2/2	**3,7 x 3,7**	12K-800	12K-800	0,85
HP-T660C*	660	Twill 2/2	**4,1 x 4,1**	12K-800	12K-800	0,93

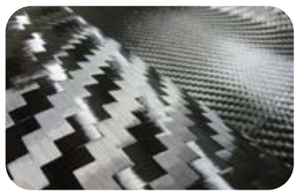
* These articles, as well as different weights, constructions and widths are available upon request!

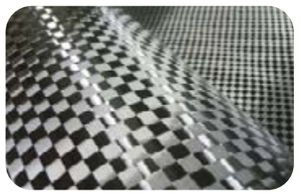
Spread Tow Carbon Fabrics

The Spread-Tow-Carbon-Fabric is a fabric with spreaded fibres.
It is very thin through the spreading of the single filaments but nevertheless the fabric is very closed. You achieve an increased strength and a lower resin consumption because of the low fibre bending. It is ideal for design applications because of its unique carbon look.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARNTYPE Weft Tex	STRAND WIDTH mm
HP-P64S25C	64	Plain	**0,4 x 0,4**	12K	12K	25
HP-T64S25C*	64	Twill 2/2	**0,4 x 0,4**	12K	12K	25
HP-T80S20C*	80	Twill 2/2	**0,5 x 0,5**	12K	12K	20
HP-P100S16C*	100	Plain	**0,6 x 0,6**	12K	12K	16
HP-T100S16C*	100	Twill 2/2	**0,6 x 0,6**	12K	12K	16
HP-P160S15C*	160	Plain	**0,66 x 0,66**	15K	15K	15
HP-P160S25C*	160	Plain	**0,4 x 0,4**	15K	15K	25
HP-T160S15C*	160	Twill 2/2	**0,66 x 0,66**	15K	15K	15
HP-P161SC	160	Plain	**4 x 4**	3K	3K	2,5
HP-T161SC	160	Twill 2/2	**4 x 4**	3K	3K	2,5
HP-P193C	193	Plain	**1,2 x 1,2**	12K	12K	8,3
HP-T193C	193	Twill 2/2	**1,2 x 1,2**	12K	12K	8,3
HP-P201SC*	200	Plain	**5 x 5**	3K	3K	2
HP-T201SC*	200	Twill 2/2	**5 x 5**	3K	3K	2

* These articles, as well as different weights, constructions and widths are available upon request!





Overview Multiaxial Carbon Fabrics

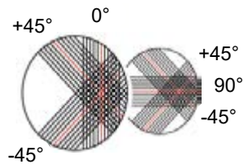
Non-woven Multiaxial Carbon Fabrics are textile structures. Their fibres are endless and located parallel to each other. They are fixed together with a sewing thread or with thermosetting. Many areas increase their competitiveness by using the advantages of multiaxial fabrics, whether in aerospace, boat building or motor sports.

Quality features

- Suitable for epoxy, polyester and vinylester resin
- Better mechanical properties
- Good wet out and lower resin consumption
- Load oriented fibre orientation

Applications

- Boat construction
- Sport equipment
- Motor sports
- Motor blades
- Mould and tank construction



ARTICLE	WEIGHT g/m²	CONSTRUCTION	FIBRE	STITCH TYPE	WIDTH cm
HP-U030/60C	30	0°	**HT-Fibre 24K Carbon**	-	60
HP-U050/50C	50	0°	**HT-Fibre 50K or 24K Carbon**	-	50
HP-U080/60C	80	0°	**HT-Fibre 50K or 24K Carbon**	-	60
HP-U100/50C	100	0°	**HT-Fibre 50K or 24K Carbon**	-	50
HP-U154/150C	154	0°	**HT-Fibre 50K Carbon**	Tricot	150
HP-U200/50C	200	0°	**HT-Fibre 50K Carbon**	Tricot	50
HP-U300/122C	300	0°	**HT-Fibre 50K Carbon**	Tricot	122
HP-U500/123C	500	0°	**HT-Fibre 50K Carbon**	Tricot	123
HP-B205C	205	0° / 90°	**HT-Fibre 50K Carbon**	Tricot	127
HP-B412C	400	0° / 90°	**HT-Fibre 50K Carbon**	Tricot	127
HP-B100C12K	100	+45° / -45°	**HT-Fibre 12K Carbon**	Franse	127
HP-B150C15K	150	+45° / -45°	**HT-Fibre 15K Carbon**	Franse	127
HP-B150C	150	+45° / -45°	**HT-Fibre 50K Carbon**	Franse	127
HP-B200C	200	+45° / -45°	**HT-Fibre 50K Carbon**	Franse	127
HP-B200C/24K	200	+45° / -45°	**HT-Fibre 12K Carbon**	Franse	127
HP-B305C	300	+45° / -45°	**HT-Fibre 50K Carbon**	Franse	127
HP-B415C	410	+45° / -45°	**HT-Fibre 50K Carbon**	Franse	127
HP-B600C	600	+45° / -45°	**HT-Fibre 50K Carbon**	Franse	127
HP-T300C	300	+45 / -45° / 0°	**HT-Fibre 50K Carbon**	Tricot	127
HP-T450C	450	+45 / -45° / 0°	**HT-Fibre 50K Carbon**	Tricot	127
HP-Q305C	300	0°/-45°/90°/+45°	**HT-Fibre 50K Carbon**	Tricot	127
HP-Q600C	600	0°/-45°/90°/+45°	**HT-Fibre 50K Carbon**	Tricot	127

Different weights, constructions and widths are available upon request!

Carbon Standard Tapes

Our Fabric-Tapes are manufactured on high-performance ribbon looms up to a width of 100mm.

ARTICLE	WEIGHT g/m²	CONSTRUCTION	THREADS/cm Warp / Weft	YARN TYPE Warp Tex	YARN TYPE Weft Tex	WIDTH mm	LENGHT m
HP-U125C/025	125	0°	**5,0 / 3,5x2**	3K-200	EC9-34	25	100
HP-U125C/050	125	0°	**5,0 / 3,5x2**	3K-200	EC9-34	50	100
HP-U175C/025	175	0°	**7,0 / 4x2**	3K-200	EC9-34	25	100
HP-U175C/050	175	0°	**7,0 / 4x2**	3K-200	EC9-34	50	100
HP-U175C/100	175	0°	**7,0 / 4x2**	3K-200	EC9-34	100	100
HP-U225C/025	225	0°	**5,0 / 3,5x2**	6K-400	EC9-34	25	100
HP-U225C/050	225	0°	**5,0 / 3,5x2**	6K-400	EC9-34	50	100
HP-U225C/100	225	0°	**5,0 / 3,5x2**	6K-400	EC9-34	100	100
HP-U340C/025	340	0°	**4,2 / 1,6**	12K-800	EC9-34	25	100
HP-U340C/040	340	0°	**4,2 / 1,6**	12K-800	EC9-34	40	100
HP-U340C/050	340	0°	**4,2 / 1,6**	12K-800	EC9-34	50	100
HP-U340C/100	340	0°	**4,2 / 1,6**	12K-800	EC9-34	100	100
HP-U525C/025	525	0°	**6,2 / 4x2**	12K-800	EC9-68	25	100
HP-U525C/050	525	0°	**6,2 / 4x2**	12K-800	EC9-68	50	100
HP-U525C/100	525	0°	**6,2 / 4x2**	12K-800	EC9-68	100	100
HP-P202C/050	205	Plain	**5,0 / 5,0**	3K-200	3K-200	50	100
HP-P202C/100	205	Plain	**5,0 / 5,0**	3K-200	3K-200	100	100

Different weights, constructions and widths are available upon request!

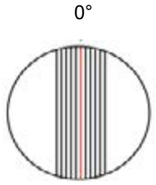
HP-P202C/050

HP-U525C/100

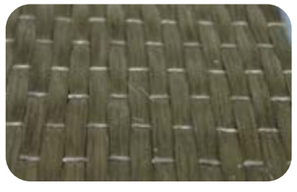
Carbon Fabric Tapes (Thermoset)

Due to the special manner of preparation the unidirectional Carbon-Fabric-Tapes are very hard-wearing and easy to handle. Shiftings are almost impossible because of the thermosetting. Carbon fibres have a high tensile strength, a low specific weight, low breaking elongation and a high temperature resistance. They have a higher strength than most metals and other fibre composites.

The elongation of CRP is elastic, the fatigue resistance and vibration damping is excellent.



ARTICLE	WEIGHT g/m²	CONSTRUCTION	MATERIAL HT-Fibre	THICKNESS mm	WIDTH cm	LENGTH m
HP-U315C/025	315	0°	**12K 800tex**	0,5	2,5	50
HP-U315C/040	315	0°	**12K 800tex**	0,5	4	50
HP-U315C/050	315	0°	**12K 800tex**	0,5	5	50
HP-U315C/100	315	0°	**12K 800tex**	0,5	10	50



HP-U315C

Carbon Braided Sleeve

Carbon braided sleeves are ideal for the production of tubes and also for prostheses in orthopedic technology. Another major area of application is spar- or hollow structures in vehicles, sports equipment and boat building. The carbon fibre sleeves are well suitable for applications with epoxy or polyester resins.

The diameter of the braided sleeves can be varied by stretching. Ideally, the fiber angle should be between 30° and 60°. Optimal torsion and shear strengths are achieved at an angle of 45°. You can find more detailed information on our product data sheet.
Our carbon braided sleeves are **always offered and sold in stretched condition**, since it is technically not possible to wrap the hoses with a fiber angle of 45°.

As a guideline, a length change of approx. 20-30% is possible.
Example: straight carbon sleeve approx. 100m / at 45° length of approx. 75m

ARTICLE	MATERIAL HT-Fibre	NUMBER OF ENDS	DIAMETER AT 45° mm	AREA OF APPLICATION ø mm
HP-BSC009/40/1	1K 67tex	40	9,5	4 - 13
HP-BSC018/32/6	6K 400tex	32	18	7 - 24
HP-BSC035/96/3	3K 200tex	96	35	15 - 45
HP-BSC062/144/3	3K 200tex	144	62	25 - 85
HP-BSC156/144/12	12K 800tex	144	156	50 - 200

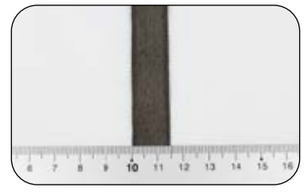
Carbon Fibre Flat Braid

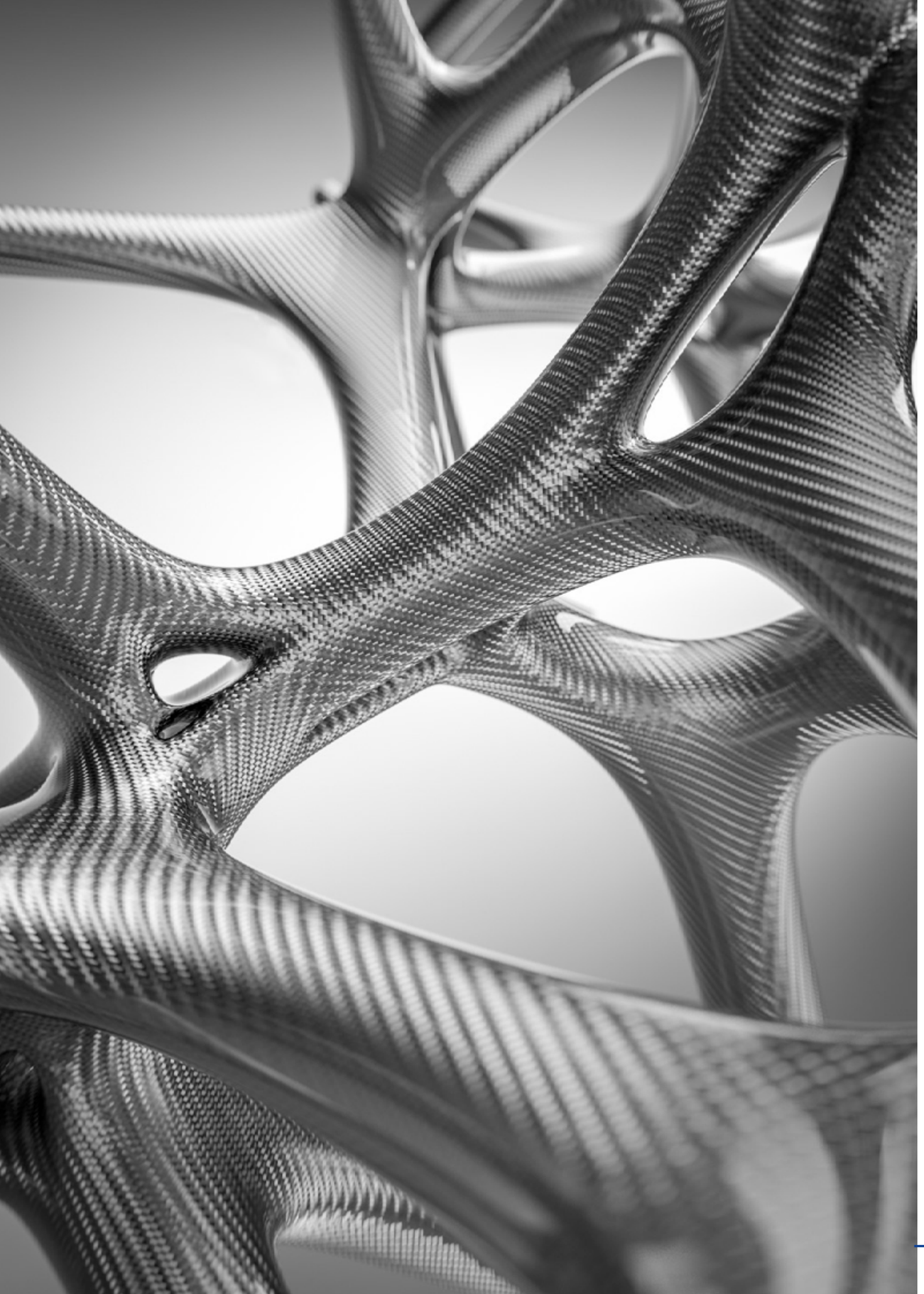
Carbon braided tapes are an excellent alternative to conventional carbon fiber tapes. Due to the special braiding technique, the application width is variable. By stretching or compressing the width can be changed. Ideally, the fiber angle should be between 30° and 60°. Optimal torsion and shear strengths without complex cutting are therefore possible.

The carbon fibre sleeves are well suitable for applications with epoxy or polyester resins. You can find more detailed information on our product data sheet.

Our carbon braided tapes are **always offered and sold in stretched condition**, since it is technically not possible to wrap the tapes with a fiber angle of 45°.
Please note that the length changes depending on the fibre angle.

ARTICLE	MATERIAL HT-Fibre	NUMBER OF ENDS	WIDTH AT 45° mm	AREA OF APPLICATION mm
HP-BFC035/65/1	1K 67tex	65	35	15 - 45
HP-BFC063/65/3	3K 200tex	65	63	30 - 80



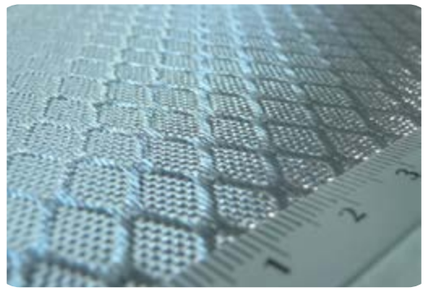


3D-Design-Fabric

The 3D-Design-Fabrics are the very latest developed glass fabric, with dyed colours and one sided metallised glass fabric twill weave. Components which are refined with this 3D-Design fabric, will get a unique 3 dimensional metallic appearance.

**** The 3D-Design-Fabrics are very smooth, has a good drapability and slip-resistance.****

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE Warp Tex	YARN TYPE Weft Tex	WIDTH cm	MATERIAL
HP-TP200EA Raute	200	Twill / Plain	**17,4 x 12**	EC9 68	EC9 68	127	Glass



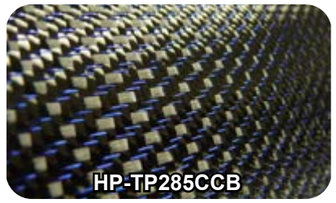
HP-TP200EA

Glitter-Carbon-Fabric

With this „glitter carbon“ you get unique and very fascinating coated surface coatings. Three-dimensional carbon fibre optics paired with fine coloured design. Depending on the incidence of light, the appearance of the coloured copper thread changes.
Because of the dense interweaving, it is relatively non-slip but still drapable and cuddly. Thus, it is not only suitable for flat components, but also for more complex curves and shapes.

Applications:
Whether vehicle parts (interior decoration, hoods, air filter cover), sports equipment (skis, snowboards, bicycle components), safety helmets, furniture or orthopaedic technology. Through this fabric to create surfaces with a unique and distinctive look.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE	YARN TYPE Weft Tex	WIDTH cm	MATERIAL
HP-T285CCB Blue	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCG Gold	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCR Red	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCB13 Pastel blue	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCP7 Pink	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCG19 Green	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper
HP-T285CCG35 Light Green	285	Twill	**7 x 10,5**	3K 200	3K 200 0,15mm Cu/Ag	100	3K Carbon Copper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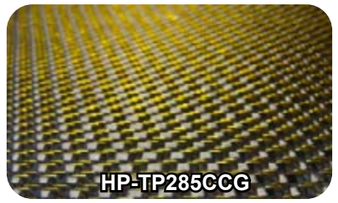
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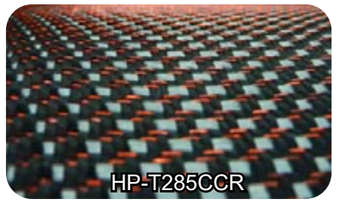
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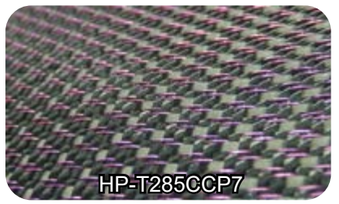
HP-TP285CCB13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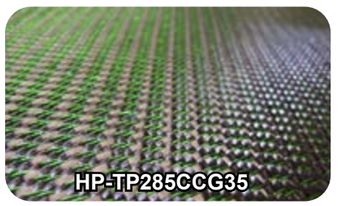
HP-TP285CCG19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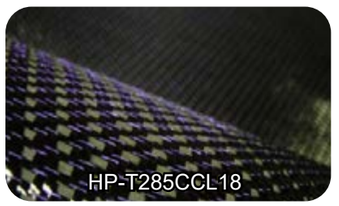
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Design-Fabric

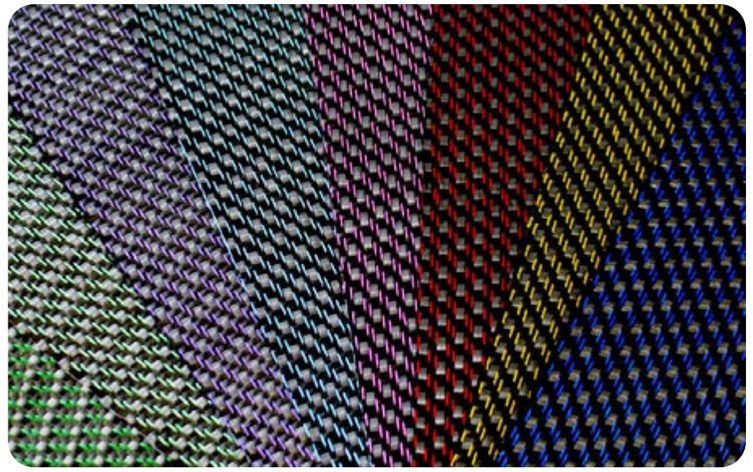
Our design fabrics have been specially developed for design applications to create unique, refined and particularly fascinating surface coatings. Due to the twill weave they are good drapable and smooth. Therefore, it is suitable for flat components, roundings and complex geometries.

Typical fields of application:
Design application, car- & motorcycling components, skis, kite-, long-, snow- and kickboards, furniture and furnishing parts, safety helmets and much more.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE	YARN TYPE	WIDTH cm	MATERIAL
HP-T405CEB	405	Twill 2/2	**6,0 x 18,0**	3K-200	3K-200 EC9-136	100/125	Polyester
HP-T405CER	405	Twill 2/2	**6,0 x 18,0**	3K-200	3K-200 EC9-136	100/125	Polyester


HP-T405CER


HP-T405CEB



Aramid Fabric

Aramid fibres are characterized by a high tenacity, a very good impact strength and abrasion resistance. Further properties are e.g. a good dampening ability, excellent chemical resistance and non-flammability.

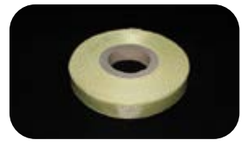
Working with the raw fabric and the laminates is often hard and therefore it is recommended to use special tools.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARNTYPE Weft Tex	THICKNESS mm
HP-P36A*	36	Plain	**8,0 x 8,0**	22	22	0,10
HP-P60A	61	Plain	**13,5 x 13,5**	22	22	0,12
HP-P75A*	75	Plain	**8,7 x 8,7**	42	42	0,15
HP-T110A*	110	Twill 2/2	**13,0 x 13,0**	42	42	0,20
HP-P110A*	110	Plain	**13,4 x 13,4**	40,5	40,5	0,18
HP-P115A*	115	Plain	**13,4 x 13,4**	42	42	0,20
HP-P120A*	120	Plain	**8,0 x 6,0**	127	22	0,20
HP-P158A*	158	Plain	**9,0 x 5,5**	158	22	0,28
HP-M160A*	160	Mesh 101	**5,0 x 5,0**	158	158	0,50
HP-P160A*	160	Plain	**5,0 x 5,0**	158	158	0,30
HP-T160A*	160	Twill 2/2	**5,0 x 5,0**	158	158	0,30
HP-P163A*	163	Plain	**6,5 x 6,5**	126	126	0,29
HP-T171A*	170	Atlas 1/7	**19,0 x 19,0**	42	42	0,30
HP-P170A	170	Plain	**6,5 x 6,5**	127	127	0,29
HP-T172A	170	Twill 2/2	**5,2 x 5,2**	158	158	0,30
HP-T170A*	170	X-Twill 3/1	**6,5 x 6,5**	127	127	0,32
HP-T174A*	170	Twill 2/2	**5,0 x 5,0**	168	168	0,35
HP-T195A*	195	Twill 2/2	**6,0 x 6,0**	158	158	0,35
HP-T220A*	220	X-Twill 3/1	**6,7 x 6,7**	161	161	0,43
HP-P230A*	230	Plain	**7,0 x 7,0**	158	158	0,35
HP-T230A*	230	Twill 2/2	**7,0 x 7,0**	158	158	0,40
HP-T231A*	230	X-Twill 3/1	**7,0 x 7,0**	158	158	0,45
HP-M230A*	230	Mesh 101	**7,0 x 7,0**	158	158	0,60
HP-P285A*	285	Plain	**10,5 x 10,5**	126	126	0,41
HP-P295A*	295	Plain	**9,3 x 8,4**	158	158	0,47
HP-T310A	310	Twill 3/1	**4,5 x 4,5**	322	322	
HP-S315A*	315	Atlas 1/4	**6,3 x 6,3**	240	240	0,56
HP-T315A*	315	X-Twill 3/1	**4,9 x 4,9**	316	316	0,60
HP-S335A*	335	Atlas 1/4	**6,8 x 6,8**	240	240	0,60
HP-S365A*	365	Atlas 1/7	**20,5 x 2,3**	158	158	0,62
HP-P470A*	470	P 4/4 4-fdg.	**10,5 x 8,5**	240	240	0,78
HP-T470A*	470	Twill 2/2	**8,0 x 6,5**	316	316	0,81
HP-P556A*	556	Panama 4/4	**8,0 x 8,0**	330	330	0,90

* These articles, as well as different weights, constructions and widths are available upon request!

Aramid Tapes

Our Fabric-Tapes are manufactured on high-performance ribbon looms up to a width of 100mm. Other weights, constructions or other widths are available by request.



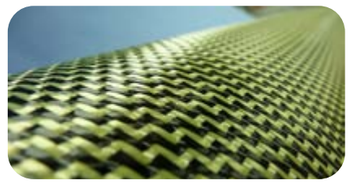
ARTICLE	WEIGHT g/m²	CONSTRUCTION	MATERIAL	THREADS/cm Warp / Weft	WIDTH cm	LENGTH m
HP-P171A/025	170	Plain	**Aramid 121tex**	7 / 3,5x2	2,5	100
HP-P171A/050	170	Plain	**Aramid 121tex**	7 / 3,5x2	5	100
HP-P171A/100	170	Plain	**Aramid 121tex**	7 / 3,5x2	10	100

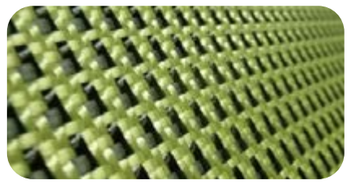
Hybrid Fabric

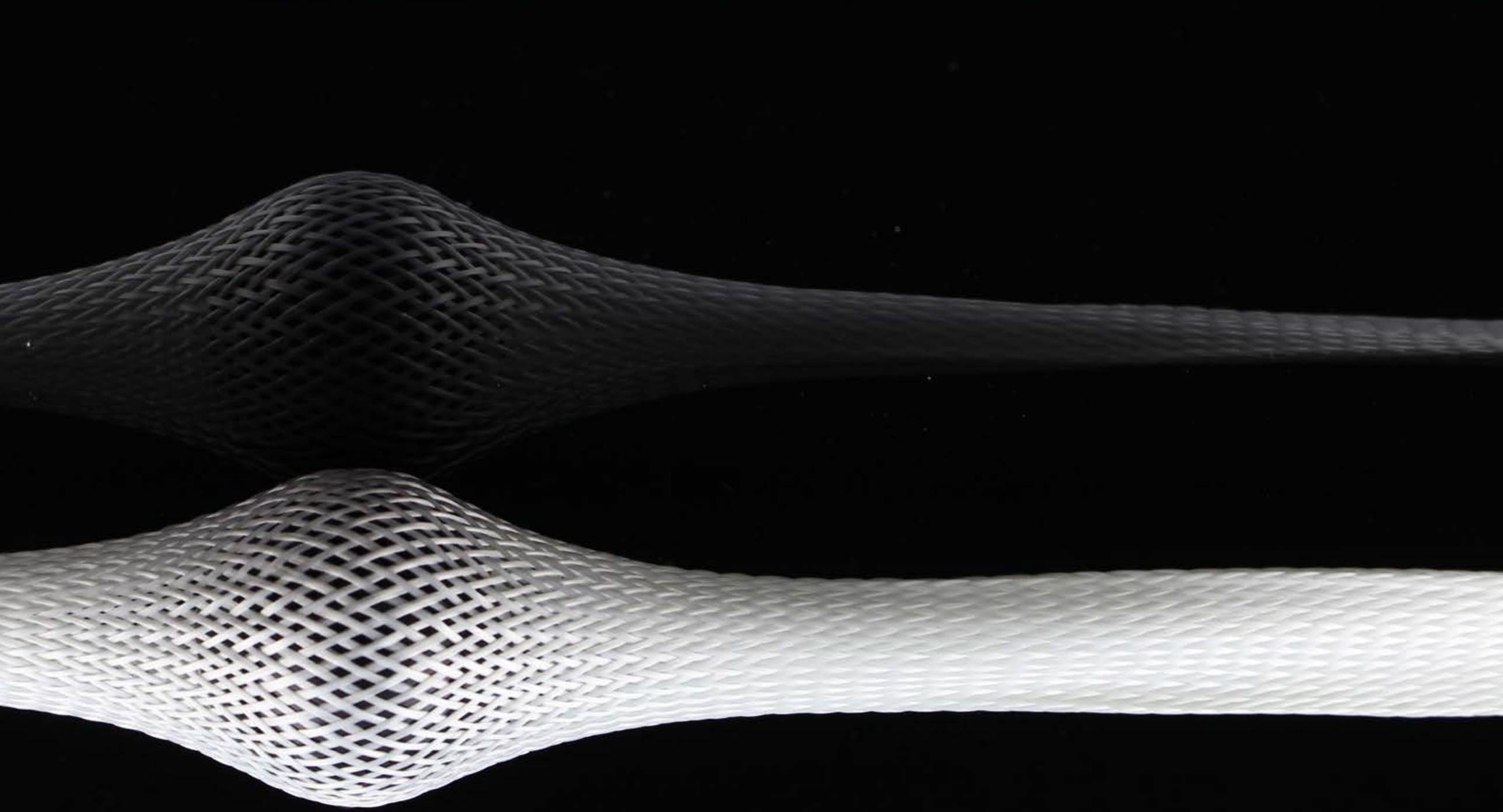
Hybrid Fabrics combine the good properties of the Carbon Fabrics with the ones of the Aramid Fabrics. Through the Carbon Fibres the fabric gets a high stiffness and the Aramid Fibres give the fabric a high impact strength, tensile strength, capacity and wear resistance.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE Warp Tex	YARN TYPE Weft Tex	THICKNESS mm
HP-P71AC*	71	Plain	**6,5 x 6,5**	1K Carbon - 67 Kevlar 49 - 42	1K Carbon - 67 Kevlar 49 - 42	0,14
HP-P96AC*	96	Plain	**10 x 10**	1K Carbon - 67 Kevlar 49 - 42	1K Carbon - 67 Kevlar 49 - 42	0,18
HP-P165AC*	165	Plain	**4,6 x 4,6**	3K Carbon - 200 Aramid 161	3K Carbon - 200 Aramid 161	0,30
HP-P166AC*	165	Plain	**4,0 x 5,0**	3K Carbon - 200 Aramid 158	3K Carbon - 200 Aramid 158	0,35
HP-P180AC	180	Plain	**5,0 x 5,0**	3K Carbon - 200 Kevlar 49 - 132	3K Carbon - 200 Kevlar 49 - 132	0,31
HP-T205AC	205	Twill 2/2	**6,0 x 6,0**	3K Carbon - 200 Kevlar 49 - 132	3K Carbon - 200 Kevlar 49 - 132	0,35
HP-T206AC	205	Twill 2/2	**5,0 x 6,0**	3K Carbon - 200 Aramid 158	3K Carbon - 200 Aramid 158	0,35
HP-T210AC*	210	Twill 3/1	**6,5 x 6,0**	3K Carbon - 200 Kevlar 49 - 127	3K Carbon - 200 Kevlar 49 - 127	0,37
HP-T240AC*	240	Twill 2/2	**6,7 x 6,7**	3K Carbon - 200 Kevlar 49 - 158	3K Carbon - 200 Kevlar 49 - 158	0,40
HP-T600AC*	600	Twill 2/2	**6,6 x 6,6**	12K Carbon - 800 Kevlar 49 - 316	12K Carbon - 800 Kevlar 49 - 316	0,90

* These articles, as well as different weights, constructions and widths are available upon request!







Glass Filament Fabric

Glass-Filament-Fabrics are weaved panels consisting of endless E-Glass-Yarn. The glass yarn is a spinning thread which is provided with a slight turning (approx. 20 - 40 turnings per meter). Glass fibre threads consist of several glass yarns which are twisted together.

The properties of textile glass materials as reinforcing materials are determined by the fineness and sizing of the spinning thread. The sizing of the thread is a thin coating based on chrome or silane compounds. It is applied with an application roll while the pulling process.

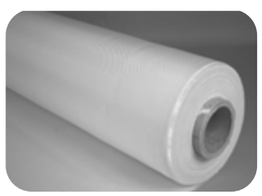
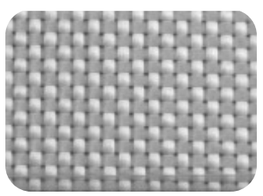
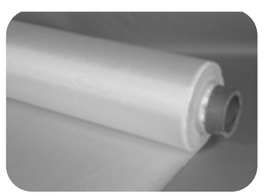
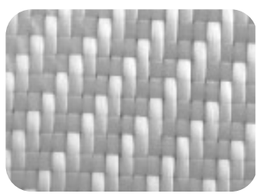
The mechanical basic features (e.g. tensile strength, tensile moduls of elasticity, elongation at break) are determined by the glass type, the application and the sizing of the thread. These include smoothness and sliding ability while processing with the textiles, the compatibility of the glass surfaces and the resin matrix and hereby the implementation of the mechanical basic features onto the composite material.

E-Glass Description

Glasstype	Density kg/dm³	Softening temperature °C	Tensilstrength MPA	Elasticity modul GPa	Elongation %	Thermal conductivity W(m.K)
E-Glas	2,59 - 2,62	825 - 860	2600	73	3,5 - 4	0,15

Comparison: Silane / Finish

	SILANE	FINISH
PREPARATION	The sizing is applied during the production of the yarn on the basis of a universal Silane bonding agent. Silane fabrics need no further treatment and are directly applicable in the fibre composite.	The fabric is first prepared from a textile fibre-glass. Thereafter, the textile glass sizing is burned. And then a special bonding agent, the so-called finish is applied. The finish consists of a bifunctional chemical compound. This compound optimized on the one hand the binding to the resin and on the other hand to the fibre.
PROPERTIES	• Good mechanical properties in the laminate • Transparent laminates • Low Fibre Print • **Very cheap** • Suitable for EP and UP resin • Good impregnation of the fibre	• Very good mechanical properties in the laminate • **Very transparent laminates** • Low Fibre Print • **Very high-quality** • Very suitable for EP and UP resin • Outstanding impregnation of the fibre • **Very low dust during cutting** • **For the first layer(s) after the mold cover layer, since they not stand out from the surface.**
APPLICATIONS	• boat building • sport equipments • vehicle industrie • model and mould components	• boat building • sport equipments • vehicle industrie • model and mould components • wood and venner coatings

Glass Filament Fabric - Silane -

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARNTYPE Weft Tex	WIDTH cm
HP-P80E	86	Plain	**12 x 11,5**	EC6-34	EC9-34	100
HP-T80E	86	Twill 2/2	**12 x 11,5**	EC6-34	EC9-34	100
HP-P110/120E	105	Plain	**16 x 15**	EC9-34	EC9-34	120
HP-T110E	105	Twill 2/2	**16 x 15**	EC9-34	EC9-34	100
HP-P163E	166	Plain	**12 x 11,5**	EC9-68	EC9-68	100
HP-T163E	166	Twill 2/2	**12 x 11,5**	EC9-68	EC9-68	100
HP-P221E	220	Plain	**8 x 5,4**	EC9-136	EC16-200	100
HP-T211E	213	Twill 2/2	**19 x 12**	EC9-68	EC9-68	120
HP-P275E	275	Plain	**8 x 5,6**	EC9-136	EC13-300	100
HP-T275E	275	Twill 2/2	**8 x 5,6**	EC9-136	EC13-300	100
HP-P385E	385	Plain	**7,4 x 5,4**	EC13-300	EC13-300	100
HP-T390E	390	Twill 2/2	**7,4 x 6,8**	EC13-272	EC13-272	100
HP-S430E*	420	Satin 4/3	**20,0 x 10,0**	EC9-68	EC9-68	100
HP-S660E*	660	Satin 8/3	**16,0 x 16,0**	EC9-68	EC9-68	100

Glass Filament Fabric - Finish -

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE Warp Tex	YARN TYPE Weft Tex	WIDTH cm
HP-P28EF	28	Plain	**21 x 9**	11,2	5,5	103
HP-P49EF	49	Plain	**20 x 22**	EC5-11	EC5-11	103-127
HP-P50EF	49	Plain	**23,5 x 18,5**	EC5-11	EC5-11	110-127
HP-P80EF	81	Plain	**12 x 11**	EC9-34	EC9-34	100
HP-U80EF	97	UD / Plain	**12 x 5**	EC9-68	EC9-34	100
HP-P100/127EF	104	Plain	**24 x 23**	EC7-22	EC7-22	127
HP-T100EF	104	Twill 2/2	**24 x 23**	EC7-22	EC7-22	110-127
HP-P160EF	160	Plain	**6 x 5,5**	2x EC9-68	EC9-136	100
HP-P163EF	160	Plain	**11,8 x 12**	EC9-68	EC9-68	100
HP-T163EF/-SOFT	160	Twill 2/2	**11,8 x 12**	EC9-68	EC9-68	100
HP-T194EF	194	Twill 2/2	**14 x 14**	EC9-68	EC9-68	120
HP-P200/127EF	206	Plain	**17 x 11,8**	EC9-68	EC9-68	127
HP-P280EF	280	Plain	**7 x 7**	3x EC9-68	EC11-204	127
HP-T280EF/-SOFT	280	Twill 2/2	**7 x 7**	3x EC9-68	EC11-204	100
HP-S300EF	300	8 Satin	**22 x 21,4**	EC9-68	EC9-68	100-127
HP-P330EF	330	Plain	**6,5 x 6,5**	5x EC9-68	3x EC9-68	100
HP-P390EF	390	Plain	**6 x 6,7**	5x EC9-68	EC13-272	100
HP-T390EF/-SOFT	390	Twill 2/2	**6 x 6,7**	5x EC9-68	EC13-272	100
HP-U445EF	440	UD / Plain	**28,5 x 6,3**	EC9-136	EC9-68	100
HP-S440EF	440	8 Satin	**6 x 8,5**	5x EC9-68	EC13-272	100
HP-HD1000EF	1000	HD-Plain	**22,4 x 14**	2x EC9-136	2x EC9-136	100

* These articles, as well as different weights, constructions and widths are available upon request!

Glass Filament Fabric Tapes -Silane-

E-Glass Fibres are the most versatile and widely used fibres of any reinforcement material.

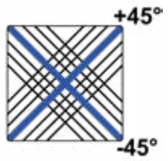
ARTICLE	WEAVE STYLE	MATERIAL: E-Glass warp / weft	DENSITY warp / weft	WEIGHT g/m²	WIDTH cm	LENGHT m
HP-P80/080E	Plain	34 x 34 tex	12 x 11,4	80	8	200
HP-P170/025E	Plain	136 x 68 tex	7,2 x 5x2	170	2,5	50
HP-P170/050E	Plain	136 x 68 tex	7,2 x 5x2	170	5	100
HP-P221/100E	Plain	136 x 200 tex	8 x 5,4	220	10	100
HP-P221/200E	Plain	136 x 200 tex	8 x 5,4	220	20	100
HP-P440/050E	Plain	300 x 600 tex	5 x 4,8	440	5	50
HP-P440/100E	Plain	300 x 600 tex	5 x 4,8	440	10	50

Different weights, constructions and widths are available upon request!

Bidiagonal Glass Fabric Tapes

This Fabric-Tape is particulary smooth and it can be easily applied around corners, curves and edges.
It is suitable for applications in boat and tank construction, model making, sports equipment, pond and swimming pool constructions.

Construction:
The fibres are crossed on top of each other in +45°C and -45°C.
They are fixed by a sewing thread.



Fields of Application:
Sports equipment,tanks, pipes, hulls, model making, boat building, reinforcements & repairs.

ARTICLE	WEIGHT g/m²	CONSTRUCTION	FIBRE	WIDTH cm
HP-B320E	320	+45° / -45°	200tex	10 / 15 / 20 / 30
HP-B420E	420	+45° / -45°	300tex	9,5

Different weights, constructions and widths are available upon request!

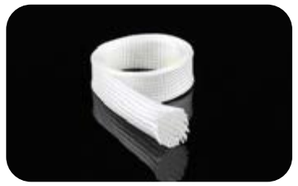
Glass Fibre Braided Sleeve

Glass fibre braided sleeves are ideal for the production of tubes and also for prostheses in orthopedic technology. Another major area of application is spar- or hollow structures in vehicles, sports equipment and boat building.
The glass fibre sleeves are well suitable for applications with epoxy or polyester resins.

The diameter of the braided sleeves can be varied by stretching. Ideally, the fiber angle should be between 30° and 60°. Optimal torsion and shear strengths are achieved at an angle of 45°. You can find more detailed information on our product data sheet.

Our glass fibre braided sleeves are **always offered and sold in stretched condition**, since it is technically not possible to wrap the hoses with a fiber angle of 45°. As a guideline, a length change of approx. 20-30% is possible. Example: straight carbon sleeve approx. 100m. / at 45° length of approx. 75m

ARTICLE	MATERIAL E-Glass	NUMBER OF ENDS	DIAMETER AT 45° mm	AREA OF APPLICATION ø mm
HP-BSE017/060	34x2tex	60	17	5 - 21
HP-BSE020/144	136tex	144	20	10 - 25
HP-BSE043/192	136tex	192	43	20 - 55
HP-BSE055/288	136tex	288	55	25 - 70



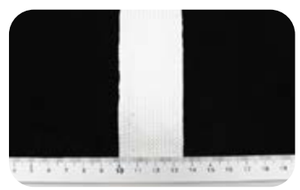
Glass Fibre Flat Braid

E-Glass braided tapes are an excellent alternative to conventional glass fiber tapes. Due to the special braiding technique, the application width is variable. By stretching or gathering together the width can be changed. Ideally, the fiber angle should be between 30° and 60°. Optimal torsion and shear strengths without complex cutting are therefore possible.

The e-glass fiber braided tapes are well suitable for applications with epoxy or polyester resins. You can find more detailed information on our product data sheet.

Our e-glass braided tapes are always offered and sold in stretched condition, since it is technically not possible to wrap the tapes with a fiber angle of 45°. As a guideline, a length change of approx. 20-30% is possible. Example: straight carbon sleeve approx. 100m. at 45° length of approx. 75m. Please note that the length changes depending on the fibre angle.

ARTICLE	MATERIAL E-Glass	NUMBER OF ENDS	WIDTH AT 45° mm	AREA OF APPLICATION mm
HP-BFE036/65	136tex	65	36	20 - 40
HP-BFE065/130	136tex	130	65	25 - 80

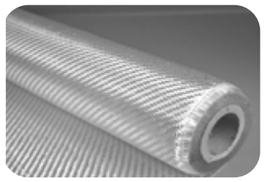
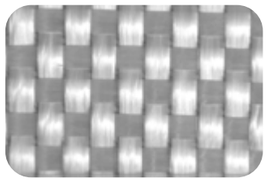


Glass Roving Fabric

The Glass-Roving-Fabric consists of one or a certain number of glass strands aligned almost parallel, twist free and bundled to form. The diameter of a single filament is between 13mµ and 24mµ.
You can make thick mouldings with less layers. The fibre content and the strength of these laminates is higher compared to the Glass-Fibre-Mats but lower than the Glass-Filament-Fabrics or multiaxial fabrics.

ARTICLE	WEIGHT g/m²	WEAVE STY-LE	THREADS/cm Warp / Weft	YARNTYPE Warp Tex	YARN TYPE Weft Tex	WIDTH cm
HP-P300E	300	Plain	**5,0 x 5,0**	300	300	130
HP-P401E	400	Plain	**3,3 x 2,3**	600	900	130
HP-T580E	580	Twill 2/2	**2,5 x 2,2**	1200	1200	130
HP-P600E	600	Plain	**2,5 x 2,4**	1200	1200	130
HP-P800E	800	Plain	**1,7 x 1,6**	2400	2400	130

Different weights, constructions and widths are available upon request!

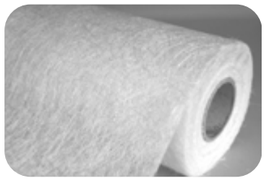
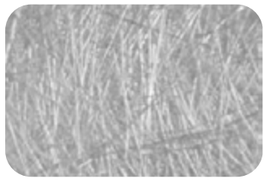
Chopped Glass Mat

The mat consists of chopped and un-oriented E-Glass spinning threads which are coated with a silane sizing. The connection of the spinning threads among each other takes place by a powdery, in styrene readily soluble and polyester based mat-binder. The processing takes place by the usual contact process. The mat is suitable for epoxy, polyester and vinylester resins.

ECR-Glass fibre mat (HP-MP450C) combine the electrical and mechanical properties of E-glass fibre with superior chemical corrosion resistance, superior thermal resistance, higher dielectric strength and better surface resistivity. ECR-Glass (E-Glass Corrosion Resitant) has an extremely high corrosion resistance. ECR-Glass chopped strand mat is made from fibreglass strands of a certain length and they are bonded together with a powder binder.

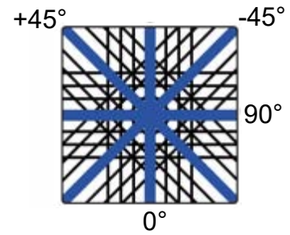
ARTICLE	WEIGHT g/m²	WIDTH cm	STRANDLINEARDENSITY tex	FILAMENT Ø µm	FIBRE TYPE
HP-MPS150E	150	125	15	12	E-Glass
HP-MP225E	225	125	33	12	E-Glass
HP-MP300E	300	125	33	12	E-Glass
HP-MP450E	450	125	33	12	E-Glass
HP-MP450C	450	104-127	30	13	ECR-Glass

Different weights, constructions and widths are available upon request!

Multiaxial Glass Fabrics

Non-woven Multiaxial Glass Fabrics are textile structures. Their fibres are endless and located parallel to each other. They are fixed together with a sewing thread or with a thermosetting.
Many areas increase their competitiveness by using the advantages of multiaxial fabrics, whether in aerospace, boat building or motor sports.



Quality features

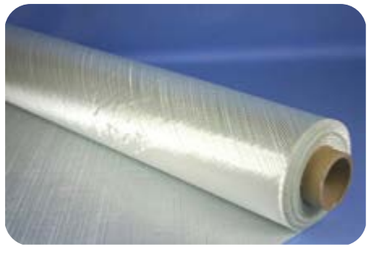
- Suitable for epoxy, polyester and vinylester resin
- Better mechanical properties
- Good wet out and lower resin consumption
- Load oriented fibre orientation

Applications

- Boat construction
- Sports equiment
- Motor sports
- Motor blades
- Mould and tank construction

ARTICLE	WEAVE STYLE	FIBRE ORIENTATION	AREAL WEIGHT g/m²	WIDTH cm	ROLL LENGTH m	ROLL WEIGHT kg
HP-U400E	Unidirectional	0°	**400**	127	50	25
HP-U600E	Unidirectional	0°	**600**	127	40	35
HP-U960E*	Unidirectional	0°	**960**	130	40	47
HP-U1210E	Unidirectional	0°	**1210**	130	32	50
HP-B421E	Bidirectional	0/90°	**421**	127	50	27
HP-B320E	Bidiagonal	+45/-45°	**320**	63/127	50/100	20/41
HP-B450E	Bidiagonal	+45/-45°	**450**	63/127	50/100	29/57
HP-B600E	Bidiagonal	+45/-45°	**600**	127	40	31
HP-B621E	Bidirectional	0/90°	**621**	127	80	50
HP-B810E	Bidiagonal	+45/-45°	**810**	127	25 / 50	25,5 / 51
HP-B980E*	Bidiagonal	+45/-45°	**980**	127	40	50
HP-B1210E*	Bidiagonal	+45/-45°	**1210**	127	35	50
HP-B630E*	Bidirectional	0°/90°	**630**	130	60	50
HP-B840E*	Bidirectional	0°/90°	**840**	130	46	50
HP-T610E*	Triaxial	0°/-45/+45°	**610**	127	50	40
HP-T750E	Triaxial	0°/-45/+45°	**750**	127	25 / 30 / 50	29 / 48
HP-T1150E	Triaxial	0°/-45/+45°	**1150**	127	25	37
HP-Q630E*	Quadraxial	0°/-45/90°/+45°	**630**	127	50	40
HP-Q800E	Quadraxial	0°/-45/90°/+45°	**800**	127	25	25
HP-Q1200E*	Quadraxial	0°/-45/90°/+45°	**1200**	127	25	38

* These articles, as well as different weights, constructions and widths are available upon request!



Mould Making Fabric - Non Woven-

This Mould-Making-Fabric is especially well drapable and tensible. It is therefore suitable for complex components and forms. It is made of 100% polyester fibres and is suitable for epoxy and polyester resins.

The resin consumption is at approx. 1,5-2 kg/m² depending on the application. It can be used effectively in single or multiple layers.

ARTICLE	WEIGHT g/m²	WEAVE	THICKNESS mm	WIDTH cm	max.TEMPERATURE °C	FIBRE TYPE
HP-VP151P	150	needled	3 - 4	130	185	Polyester

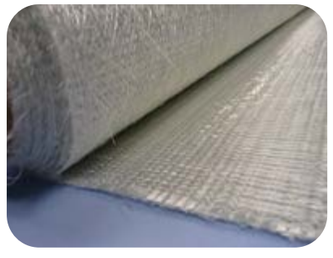
**** Ideal for complex curvatures ****

Combo Mat

This combination mat made of Advantex® glass (ECR glass) is manufactured by spreading and stitching cut, non-oriented glass fibers onto a glass scrim. This combination of glass scrims with a glass mat combines the properties of the individual components and thus saves one work step.

Advantex® glass is a boron-free glass and offers significantly improved corrosion resistance in a variety of aggressive environments. Due to its high corrosion resistance, it is also suitable for the production of composite sewer pipes.

This combination mat is also considerably cheaper than using a glass fabric and another glass fiber mat. It is suitable for processing with polyester, vinyl ester or epoxy resins.



ARTICLE	WEIGHT g/m²	COMBINATION	UNIT WEIGHT g/m²	CONSTRUCTION	FIBRE TYPE
HP-PC1050AD	1050	**Multiaxial Fabric Glass Mat**	600 450	0°/90° stitched **Good resistant to acids and alkalis**	Advantex-Glass®

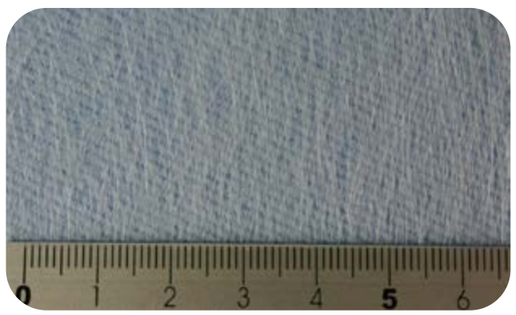
Different weights, constructions and widths are available upon request!

C-Glass Non Woven

The non-woven C-Glass-Fabric has a styren soluble binder. It has an optimised chemical resistance and a thread equipment on a silane basis. The binder disperses quickly in the resin, therefore it is possible to handle complex geometries and curves.

The C-Glass fabrics can be applied in different processes (e.g. by using low pressure) in order to achieve visually and chemically improved surfaces.

ARTICLE	WEIGHT g/m²	BINDERCONTENT %	TENSILSTRENGHT N/5cm	WIDTH cm	FIBRE TYPE
HP-VJ30C	30	6,5	≥ 25	100 / 127	**C-Glass**
HP-VJ50C	50	5	≥ 30	100	**C-Glass**



SORIC®
COREMAT®
FLEXURAL STRENGTH
PET-FOAM
BOAT BUILDING
SANDWICH PLATES
HONEYCOM STRUCTURE
FOAM HONEYCOMBS
DNV GL CERTIFICATION

SANDWICH MATERIAL

VAKUUM TECHNOLOGY
STRUCTURE REINFORCING FOAM CORE
YACHT CONSTRUCTION
HARD FOAMS
LIGHTWEIGHT
THREE-DIMENSIONAL MOLDABILITY
CORE MATERIAL
LONGBOARDS

3D|CORE ™ - made from recycled material -

Description:

The 3D|CORE™ PET GR foam core is a green foam made from 100% recycled material. The core is a closed-cell, thermoplastic and recyclable high-performance core with excellent technical properties. This is particularly suitable for the construction of high-strength lightweight components. The integrated honeycomb structure offers more flexibility and simplifies handling in production.
The foam core follows the guidelines of the circular economy and contributes to the preservation and improvement of the human environment.
This foam core can be processed with all known resin systems and processes.

Properties:

Excellent resistance
Excellent long-term thermal stability up to 100°C
Very high processing temperature up to 180°C
Closed cell core (no water absorption, no thermal expansion, no outgassing)
Easy processing with all known resin systems and processes
Very high chemical resistance
Homogeneous bonding of all components
Excellent surface adhesion (bond between top layer and core)
Consistent material properties
Good thermal insulation
Integrated flow aid

Processes:

Hand laminate
Vacuum infusion
Resin injection RTM (VARTM, LRTM and HP-RTM)
Wet pressing
Autoclave
Prepreg
SMC
Bonding

ARTICLE	SHEET SIZE mm	THICKNESS mm	MATERIAL *PET 95kg/m³*	Sheets / Box
HP-3DCORE-GR-3	1015 x 405 x 3	3	+	155
HP-3DCORE-GR-5	1015 x 405 x 5	5	+	98
HP-3DCORE-GR-7	1015 x 405 x 7	7	+	71
HP-3DCORE-GR-10	1015 x 405 x 10	10	-	51
HP-3DCORE-GR-12,5	1015 x 405 x 12,5	12,5	+	40
HP-3DCORE-GR-15	1015 x 405 x 15	15	+	34
HP-3DCORE-GR-20	1015 x 405 x 20	20	+	25
HP-3DCORE-GR-25	1015 x 405 x 25	25	+	20

3D|CORE ™ XPS

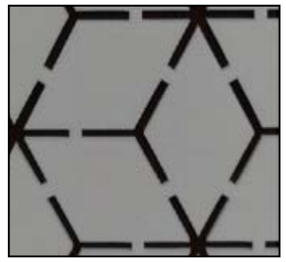
3D | CORE ™ is a Structure Reinforcing Foam Core (SVS) that consists of hexagonal foam honeycombs interconnected by fine webs.
The honeycomb construction gives the board enormous flexibility, allowing for excellent drapability of the foam core, thus following a contour.

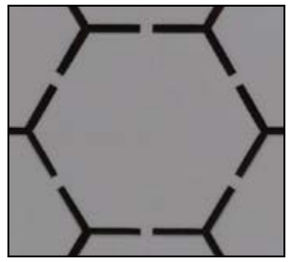
The used **polystyrene foam (XPS)** only has a density of approx. 45Kg / m³. This foam system is particularly suitable for weight savings in areas of components that are exposed to lower dynamic loads. Due to the low resin absorption and the small cell size, the weight / power ratio is significantly better than many other foams.

In addition to the familiar HEXAGON structure, the new RHOMBUS structure (division of the hexagon into 3 rhombuses) offers an even more flexible application. But HEXAGON and RHOMBUS can also be combined depending on the application.

By simplifying the processing, 3D | CORE ™ improves the production processes and is therefore also a. Also ideal for the IMC / MTI® process. Not only time but also material is saved.

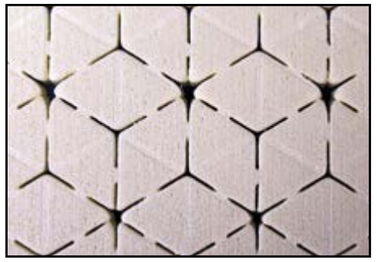
Attention:
3D|CORETM XPS can only be processed with **solvent-free epoxy systems.**


Rhombus


Hexagon

ARTICLE	SHEET SIZE mm	THICKNESS mm	STRUCTURE	Sheets / Box	m² / Box
HP-3DXPS-HX-3	1015 x 405 x 3	3	Hexagon	155	63,72
HP-3DXPS-HX-5	1015 x 405 x 5	5	Hexagon	98	40,29
HP-3DXPS-HX-10	1015 x 405 x 10	10	Hexagon	51	20,96
HP-3DXPS-RB-3	1015 x 405 x 3	3	Rhombus	155	63,72
HP-3DXPS-RB-5	1015 x 405 x 5	5	Rhombus	98	40,29
HP-3DXPS-RB-10	1015 x 405 x 10	10	Rhombus	51	20,96

Hexagon
Resin Comsumption:
surface approx. 200g/m² per site
structure approx. 90g x mm x m²



Rhombus
Resin Comsumption:
surface approx. 200g/m² per site
structure approx. 126g x mm x m²

HP-CORE

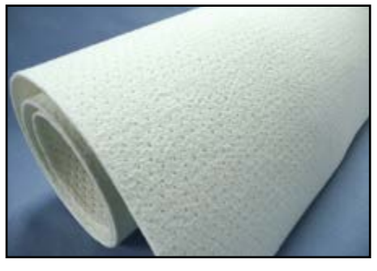
HP-CORE is a high performance non-woven fabric developed specifically for the Fibre Reinforced Plastics (FRP) industry.
Designed with a micro-cellular structure, which provides volume with a very low weight and voids that allow easy absorption of resin, HP-CORE is ideal for use as a core material in FRP sandwich constructions with polyester and epoxy resin.

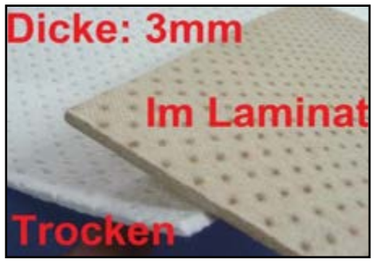
Features:

- Stretchable in all directions - in the wet as well as in the dry
- Good drapability
- Suitable for complicated shapes
- Suitable for polyester, vinyl ester and epoxy resins

Areas of application:
Swimming pools, boat building (hulls, superstructures), canoes and kayaks, containers and mold making, vehicle parts (chassis, bodywork and roof boxes), motor homes and caravans, ski and snowboards, and much more.

ARTICLE	SPECIFIC WEIGHT kg/m³	DRY THICKNESS mm	DRY WEIGHT g/m²	ROLL WIDTH cm	ROLL LENGTH m	RESIN ABSORPTION kg/m²
HP-CORE-1	660	1,3	60	100	100	0,8
HP-CORE-2	640	2,0	75	100	70	1,2
HP-CORE-3	630	3,0	90	100	50	1,8
HP-CORE-4	630	4,0	120	100	40	2,4
HP-CORE-5	630	5,0	140	100	35	3,0





We are HP-Textiles

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Sandwich Material

ADHESIVE GLASS FIBRE TAPE
PUSH CONNECTOR
VACUUM BAGGING TUBE
BLADE-RUNNER®
INFUSION MESH
SEALANT TAPE
VACUUM MESH
VACUUM BAGGING FILM
SPIRAL TUBE
MTI®-VALVE

VAKUUM TECHNOLOGY

SQUEEZEE®
PEEL-PLY
MTI®-HOSE
IQS-CONNECTORS
PEEPL PLY
MANOMETER
VACUUM PUMP
VACUUM-HOSE
SPIRAL TUBE
PERFORATES RELEASE FILM
NON-WOVEN ABSORBER

Vacuum Technology

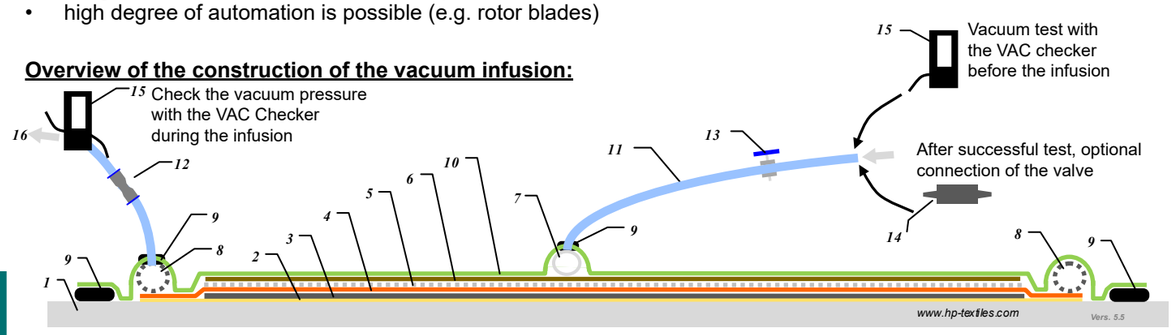
In a fibre-reinforced combination, the load admission is taken primarily of the fibres.To achieve a high strength, composite components should have a very high fiber volume fraction.This is achieved by the vacuum infusion process.

In the Vacuum-Infusion-Process, the materials are laid dry into the mould and the vacuum bagging film is applied before the resin is introduced.
The vacuum bagging film is heremetically sealed with sealing tape. Once a complete vacuum is achieved, a fluid resin is literally sucked into the laminate via a second tube. The reinforcement fibres are thus vented through the infusion resin and impregnated and compressed at the same time.

Advantages of the Vacuum-Infusion-Process:

- high fibre volumen fraction and therefore achieving of optimal component properties
- minimizing of gas and air pockets because of the closed impregnation
- manufacturing of complex and three-dimensional components is possible
- integration of inserts and foam cores is possible
- high degree of automation is possible (e.g. rotor blades)

Overview of the construction of the vacuum infusion:



	Description	Material / Notes	Item
1 -	**Mould**		
2 -	**Release agent**	aqueous, up to 150°C (briefly up to 200°C) Priming wax and PVA, up to 100°C Carnauba wax, up to 80°C	**HP-HGR5** **HP-G** and **HP-PVA** **HP-CX7**
3 -	**Reinforcement fibres**	various types	
4 -	**Peel ply**	Polyamide, twill / plain, var. width	**HP-P83P** or **HP-T105P**
5 -	**Perforated film**	HDPE, 30g/m² or 44g/m²	**HP-RF30/130 or HP-RF44**
6 -	**Flow aid**	PE 145g/m², width 100cm	**HP-IM145/100 o. HP-IM230/120**
7 -	**Flow channel**	PE spiral hose / Blade-Runner®	**HP-ST060, HP-ST080**, **HP-ST100 / HP-VZ1475**
8 -	**Vacuum ring line**	MTI®-hose	**HP-MTI-08**
9 -	**Vacuum sealing tape**	Butyl rubber, use up to 80°C, black synth. rubber, use up to 210°C, yellow	**HP-ST12X3/80** **HP-ST10X3/210**
10 -	**Vacuum bagging film**	PA/PE/PA, width 2,60m PA/PE/PA, width until 8m, very clear PA/PE/PA as hose, width 1,50m PA as hose, width 20, 30, 60, 90cm	**HP-VF60/260** **HP-VF70** **HP-VFT75/150** **HP-VFT50**
11 -	**Vacuum hoses**	PE (esp. inexpensive), 10 or 12mm PUR (esp. flexible), 10 or 12mm	**HP-VZ1010** or **HP-VZ1020** **HP-VZ1030** or **HP-VZ1040**
12 -	**Plug connectors**	various types, manometer, valves, etc…	
13 -	**Squeezee®/Squeezer®**	hose clamp	**HP-VZ1400** or **HP-VZ1425**
14 -	**MTI® Valve**	Automatic valve for vacuum infusion	**HP-VZ1450**
15 -	**VAC Checker**	Digital Vacuum Gauge	**HP-VZ1440**
16 -	**Vacuum pump**	Rotary vane pump, oil-lubricated	**HP-VZ1200, HP-VZ2000**

Peel Ply / Tear-Off Fabric

The Peel Ply has been well-known in aircraft construction for many years. It is made of Nylon and is added into epoxy– or polyester resins as the first and/or final layer of the construction.

After hardening, just before further processing it has to be peeled off slowly and in a sharp angle. This result is an overall rough, bondable upper surface free from lubricating film. Sanding or cleaning of the surface is not necessary before sticking or coating.

The Peel Ply can‘t remain in the construction therefore a red or blue tracer thread is woven into the fabric.

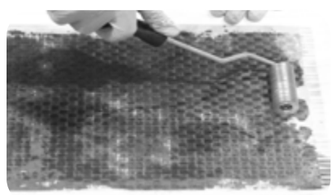
Advantages of working with Peel Ply Fabrics:

- Accurate upper surface
- A bit rough after tearing off, absolutely clean and free of dust
- Ideal subsoil for bonding or further laminating / painting
- Saves time, no need to grind with sand-paper or removing of grinding dust

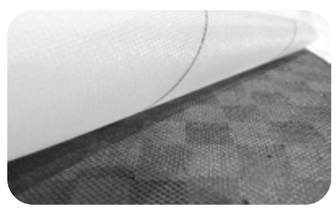
In some cases slip resistant components are required (e.g. stand space of surf boards, boat decks). After tearing off the Peel Ply the surface is ready for use.

ARTICLE	WEIGHT g/m²	WEAVE STYLE	THREADS/cm Warp / Weft	YARN TYPE Warp/Weft	WIDTH cm	FIBRE TYPE	HEAT RESISTANT
HP-P83P3	83	Plain	**19 x 16**	235 dTex	3	Nylon 6.6	170 °C
HP-P83P4	83	Plain	**19 x 16**	235 dTex	4	Nylon 6.6	170 °C
HP-P83P5	83	Plain	**19 x 16**	235 dTex	5	Nylon 6.6	170 °C
HP-P83P8	83	Plain	**19 x 16**	235 dTex	8	Nylon 6.6	170 °C
HP-P83P10	83	Plain	**19 x 16**	235 dTex	10	Nylon 6.6	170 °C
HP-P83P15	83	Plain	**19 x 16**	235 dTex	15	Nylon 6.6	170 °C
HP-P83P20	83	Plain	**19 x 16**	235 dTex	20	Nylon 6.6	170 °C
HP-P83P60	83	Plain	**19 x 16**	235 dTex	60	Nylon 6.6	170 °C
HP-P83P60RB	83	Plain	**19 x 14**	235 dTex	60	PA 6.6	200 °C
HP-P83P100	83	Plain	**19 x 16**	235 dTex	100	Nylon 6.6	170 °C
HP-P83P100RB	83	Plain	**19 x 14**	235 dTex	100	PA 6.6	200 °C
HP-P83P150	83	Plain	**19 x 16**	235 dTex	150	Nylon 6.6	170 °C
HP-T105P25	105	Twill	**21 x 21**	235 dTex	25	Nylon 6.6	170 °C
HP-T105P100	105	Twill	**21 x 21**	235 dTex	100	Nylon 6.6	170 °C
HP-T105P125	105	Twill	**21 x 21**	235 dTex	125	Nylon 6.6	170 °C

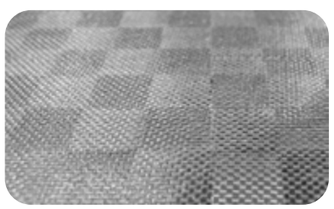
Different weights, constructions and widths are available upon request!



1. Introduce the Peel Ply as the last layer



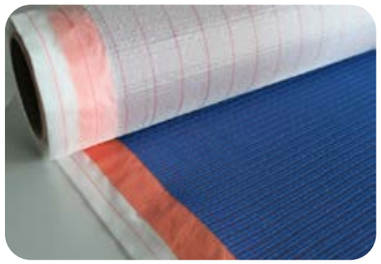
2. After curing tear off the Peel Ply fabric



3. Ideal surface for further works

Triplex Mesh for Vacuum Processes HP-TX275/152

Our Triplex Mesh combines three auxiliary vacuum materials in one: peel ply, perforated release film and mesh.
The 3-in-1 structure makes it particularly easy to handle and, above all, time-saving and safe to use.
Alternatively, the materials can also be easily separated (picture 3) - this is particularly advantageous if, for example, special cuts of the individual layers are required.



Advantages and properties of the individual layers:

- **Peel ply for a perfect surface finish**

The peel ply ensures a precise, even surface structure of the laminate, which is absolutely dust-free and clean after peeling. This eliminates the need for tedious and time-consuming sanding and the removal of fly dust.
The substrate is therefore ideal for gluing, laminating or sealing/varnishing.

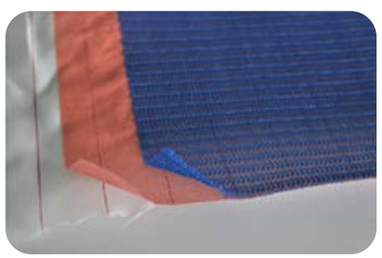
- **Perforated release film for optimised flow behaviour**

The perforated film makes it easier to separate the laminates from the vacuum build-up.
In vacuum infusion, the perforated film also improves the flow behaviour, especially with larger components.

- **Mesh for an optimal structure**

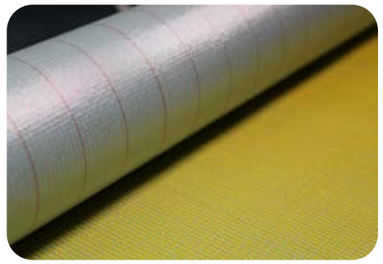
The venting net / flow aid enables an unhindered air flow and thus promotes the formation of a uniform laminate structure.

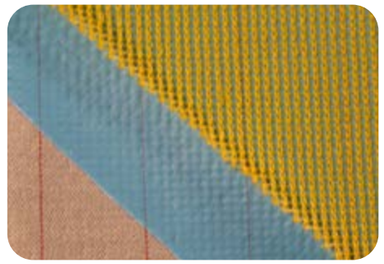
Article: HP-TX275/152	Total	Peel Ply	Perforated Film	Mesh
Weight	275 g/m²	85g/m²	50 g/m²	140 g/m²
Weave Style		Plain		
Material		Nylon 6	P31 HDPE 26µ film	Blue HDPE net
Thickness	1,15 mm			
Width	152 cm	152 cm	146 cm	141 cm
Colour		white with red tracer thread	red	blue
Temperature Resistance	120 °C			



Triplex Mesh for Vacuum Processes HP-TX280/150

Our Triplex Mesh combines three auxiliary vacuum materials in one: peel ply, perforated release film and mesh.
The 3-in-1 structure makes it particularly easy to handle and, above all, time-saving and safe to use.
Alternatively, the materials can also be easily separated (picture 3) - this is particularly advantageous if, for example, special cuts of the individual layers are required.





Advantages and properties of the individual layers:

- **Peel ply for a perfect surface finish**

The peel ply ensures a precise, even surface structure of the laminate, which is absolutely dust-free and clean after peeling. This eliminates the need for tedious and time-consuming sanding and the removal of fly dust.
The substrate is therefore ideal for gluing, laminating or sealing/varnishing.

- **Perforated release film for optimised flow behaviour**

The perforated film makes it easier to separate the laminates from the vacuum build-up.
In vacuum infusion, the perforated film also improves the flow behaviour, especially with larger components.

- **Mesh for an optimal structure**

The venting net / flow aid enables an unhindered air flow and thus promotes the formation of a uniform laminate structure.

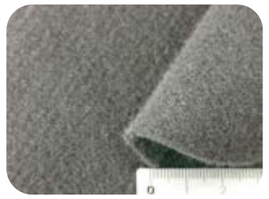
Article: HP-TX280/150	Total	Peel Ply	Perforated Film	Mesh
Weight	280 g/m²	83g/m²	40 g/m²	120 g/m²
Weave Style		Plain		
Material			P31 HDPE 26µ film	Blue HDPE net
Width	150 cm	150 cm	150 cm	150 cm
Colour		white with red tracer thread	blue	yellow
Temperature Resistance	120 °C			

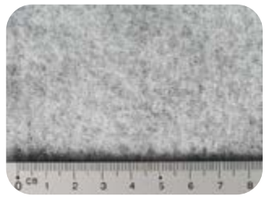
Low-cost alternative to the HP-TX275/152

Polyester Non-Woven Absorber

The non-woven absorber has a good drapeability.
Ideal for the use in connection with components containing complex curvatures or acute radius. It absorbs the excess resin which is pressed through the Perforated Release Film. It can be used effectively in single or multiple layers.

ARTICLE	WEIGHT g/m²	WEAVE	THICKNESS mm	WIDTH cm	max.TEMPERATURE °C	FIBRE TYPE
HP-VP80P	80	needled	2	80	185	Polyester black
HP-VP150P	150	needled	3 - 4	130	185	Polyester white

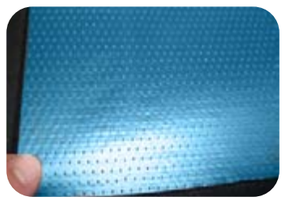




Perforated Release Film

High-tensible perforated Release Film. Ideal for the use in a vacuum bag / autoclave processing of composites and vacuum press method. Suitable for the use of polyester, epoxy and phenolic resin systems. Basic purpose of the Release Film is to ensure the proper release of the helping material from the component. The Release Film is placed directly on the Peel Ply in contact with the laminate. It separates the laminate from beather / bleeder fabrics, which have no release characteristics.

ARTICLE	WEIGHT g/m²	THICKNESS µm	WIDTH cm	max.TEMPERATURE °C	ENLOGATION AT BREAK %	MATERIAL
HP-RF30/130	30	35	130	120	> 210	HDPE
HP-RF44/100	30	44	100	120	> 210	HDPE
HP-RF44/156	30	44	156	120	> 210	HDPE



Vacuum Mesh / Infusion Mesh

The Infusion Mesh has to be applied between the Vacuum Film and the Release Film to ensure the even flow of resin throughout the moulds surface. It is generally coloured in green for a better visual clarity. After the resin is cured it has to be removed from the surface of the mould area.

ARTICLE	WEIGHT g/m²	THICKNESS mm	WIDTH cm	max.TEMPERATURE °C	FIBRE TYPE	DRAPABILITY
HP-IM145/100	145	1,15	100	120	HDPE	good
HP-IM230/120	200	1	120	120	HDPE	not good

HP-IM145/100

HP-IM230/120

Resin channel for vacuum infusion

Flat channel for vacuum infusion. It consists of a three-dimensional polyester filament core structure wrapped in a non-woven polyester. **Very flexible** and easy to cut to the appropriate size.

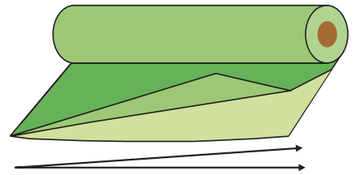
Advantages
- No print on the laminate
- Excellent resin flow
- Easy application and easy cut

ARTICLE	WEIGHT g/m	THICKNESS mm	WIDTH mm	max. TEMPERATURE °C	MATERIAL	PACKING LENGTHS
HP-VZ1520	25	4	50	80	Polyester	
HP-VZ1530	50	4	100	80	Polyester	

Vacuum Bagging Film

Our Vacuum Bagging Film has good mechanical properties:
It has a high tensile strength, good temperature resistance, it is flexible and it has a low permeability.

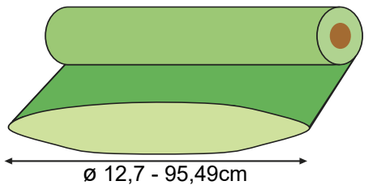
The Vacuum Bagging Film is the last material in the layer-construction. It should be fixed on the mould by our Sealant-Tape (HP-ST12X3/80 or HP-ST10X3/210).



ARTICLE	WEIGHT g/m²	THICKNESS µm	WIDTH cm	max.TEMPERATURE °C	ENLOGATION AT BREAK %	MATERIAL
HP-VF70/260	70	70	260	127	> 400	PE/PA/PE
HP-VF70/400	70	70	400	127	> 400	PE/PA/PE
HP-VF70/600	70	70	600	127	> 400	PE/PA/PE
HP-VF70/800	70	70	800	127	> 400	PE/PA/PE

Vacuum Bagging Tube

Our Vacuum Bagging Tube is reasonable priced and has good mechanical properties:
It has a high tensile strength, a good temperature resistance, it is flexible and it has a low permeability.
Moulded components could be shoved into the tube. The ends get fixed with our Sealant-Tape (HP-ST12X3/80 or HP-ST10X3/210).

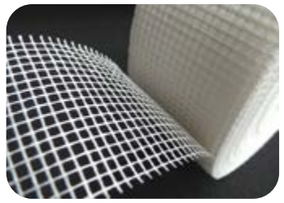


ø 12,7 - 95,49cm

ARTICLE	WEIGHT g/m²	THICKNESS µm	ø cm	TEMPERATURE max. °C	MELTING POINT °C	ENLONGATION AT BREAK %	MATERIAL
HP-VFT50/030	50	50	19,1	195	> 205	> 330	PA
HP-VFT50/060	50	50	38,2	195	> 205	> 330	PA
HP-VFT50/090	50	50	57	195	> 205	> 330	PA
HP-VFT70/150	70	70	95,49	100	> 127	> 300	PE/PA/PE
HP-VFT75/150	75	75	95,49	120		> 360	PA/PE/PA

“Double Sided” Adhesive Fibre Glass Tape

The Fibre-Glass-Tape is used to fix different fabrics or core materials together or to fasten them in the mould.

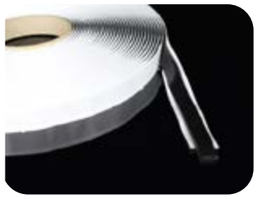


ARTICLE	WEIGHT g/m²	WIDTH cm	LENGTH m	FIBRE TYPE
HP-AM075/050	75	50	90	E-Glas

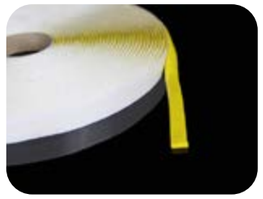
Sealant-Tape

The Sealant Tape is a double-sided adhesive, non-shrinking, workable and sound absorbing vacuum bag tape. It is used to create a seal between the Vacuum Bagging Film and the mould and to position the Spiral Tubes.

ARTICLE	THICKNESS mm	WIDTH mm	ROLL LENGTH m	COLOUR	max.TEMPERATURE °C	MATERIAL
HP-ST12x3/80	3	12	15	black	80	Butyl Rubber
HP-ST12X2,5/140	2,5	12	15	black	140	Butyl Rubber
HP-ST12x3/210	3	12	12,5	yellow	210	Butyl Rubber



HP-ST12X3/80



HP-ST10X3/210

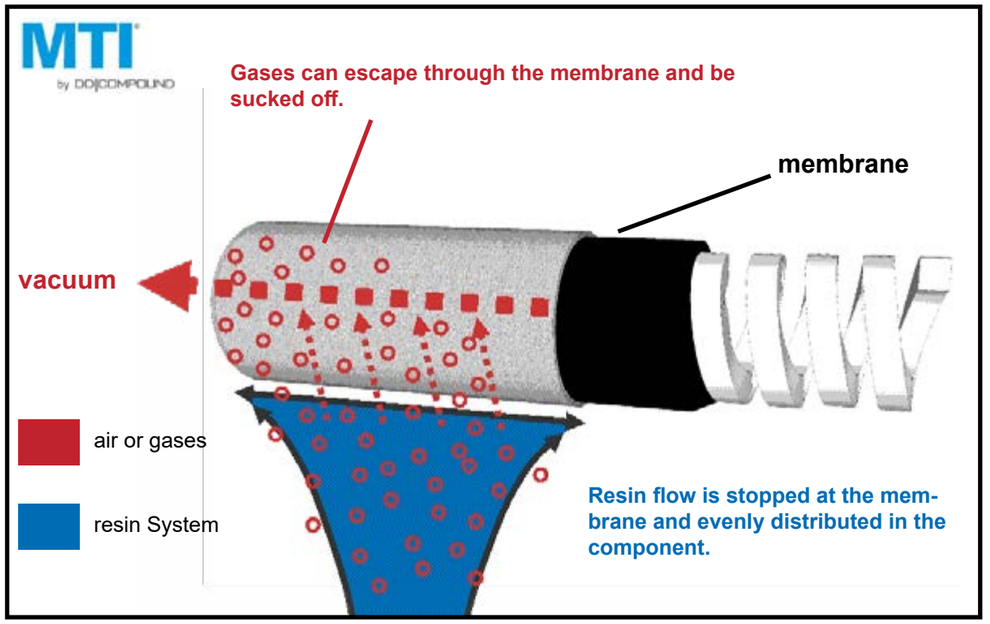
Spray adhesive

The spray adhesive HP-FIX400 is for the fixation of different reinforcement materials from HP-Textiles to hold single layers in position.

- To fix reinforcing fabrics (carbon, glass, aramid,…), core materials or vacuum aids in place
- Application in combination with the epoxy resins from HP-Textiles (other brands should be tested)
- Excellent spray control with adjustable spray button and dosage valve
- Bonding wood, textiles, rubber, foams, many synthetic materials, paper and other base materials

ARTICLE	COLOUR	DRYING TIME min	TEMPERATURE RESISTANCE °C
HP-FIX400	milky cloudy	5 (20°C)	80

MTI® - Hose



The MTI® - Hose is a membran coated suction pipe in the branch of vacuum infusion. This new technology will provide more quality, less costs and better mechanical properties. The pores of the membrane are very small, holding the resin back and only leaving the air through the pores. The MTI® - Hose should be placed as a ring line on the edge of the mould.

Advantages:

- Optimization of component quality and minimization of air inclusions
- No resin trap is needed anymore, reducing resin consumption
- Freely configurable resin course, it eliminates complex calculations
- Minimization of dry spots, complete component impregnation and higher process reliability
- High fibre volume fraction, adjustable via the infiltrated amount of resin

ARTICLE	OUTER Ø mm	INNER Ø mm	MAX. OPERATION TEMP. °C	EXHAUST CAPACITY/m by pabs. 50mpas	SUITABLE FOR
HP-MTI-08	15	8	80	< 50l/m	EP- & UP-Resin

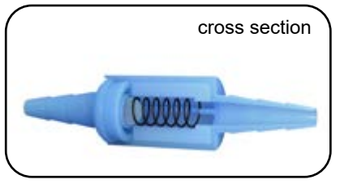
On our website in the Video & Download Portal you‘ll find various work instructions and videos around the theme of the MTI®-Hose for free. You‘ll reach our download portal comfortably over this QR-Code, or on our website www.hp-textiles.com under the category „service“.

MTI® VALVE - Automatic Valve for Vacuum Infusion -

Article: HP-VZ1450

Advantages:

- Regulates the infusion of resin independently
- No resin pooling at inlet point
- Fibres are evenly covered with resin
- Homogeneous laminate
- Optimum fibre volume ratio
- Highest quality of parts with reproducible results
- Working hours and its costs can be saved



Video for more information !!

Tube Clips

Squeezee® / Squeezer® allows an exact dosing of the resin flow and an easy disconnecting of the resin line in the vacuum infusion.

Squeezee®

Article: HP-VZ1400
for hoses up to 15mm outer-Ø

Advantages:
- Ideal for disconnecting all tube lines
- Requires only a minimum of force for disconnecting resin lines
- Exact dosing of the resin flow is possible
- Designed for the everyday, industrial application
- Suitable for tubes up to 15mm outer diameter

Spiral Hose Connector

Spiral hose connector for easy connection of the vacuum infusion pipe. Suitable for 12 mm pipe (HP-VZ1020 / HP-VZ1040) and spiral hoses up to 14,6 mm outside diameter (HP-ST080 / HP-ST100).

Infusion Connector 12mm

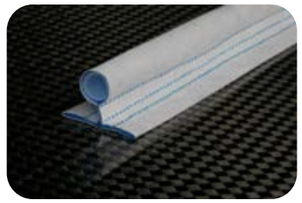
For Pipe OD=12 mm (HP-VZ1020 / HP-VZ1040)
No imprints in the laminate and easy handling combined with the vacuum flat channel HP-VZ1520 (50 mm) or HP-VZ1530 (100 mm).

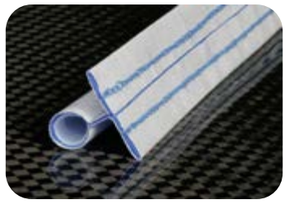
Resin feed line Blade Runner®

During the setup for the vacuum infusion, one or more resin feed lines are placed on the part. Often a normal spiral tube or an omega channel is used. Now this one can simply be substituted by the new resin feed line.

Due to the construction and the materials the Blade Runner® is more stable than a normal spiral tube. Thereby it is easier to place and fix it at the desired place. This makes the setup for the vacuum infusion faster. By its unique design the new resin feed line keeps a distance to the part surface. Blade Runner® does not leave any print on the surface and minimizes air impacts especially in the area where the resin feed line is placed. The result is a higher part quality with a perfect surface and structurally better parts.

With Blade Runner® working hours and consequently costs can be saved for the setup and the work on the surface after the infusion. The resin feed line is suitable for all parts which will be produced with the vacuum infusion process. Blade Runner® can be used for prototypes, small series, batch production and for mould building. It is particulary suitable for big and long parts like boats or also rotor blades of wind turbines.





Advantages:
- Easier to place and fix at the desired place
- The setup for the vacuum infusion process will be faster
- The resin feed line does not leave any print on the surface
- Minimisation of air impacts under the resin feed line
- With a smooth surface, structurally better parts will be produced
- Saving of working hours and consequently costs for the setup and the working on the surface

Innovation in the Vacuuminfusion

ARTICLE	INNER Ø mm	MAX. OPERATION TEMP. °C	SUITABLE FOR
HP-VZ1475	20	80	EP- & UP-Resin

Resin supply hose for the Blade Runner®

Using the resin supply pipe, the resin runs through the Blade Runner® Connector into the Blade Runner® resin line. PVC hose with spring steel wire, highly flexible, robust, smooth interior and exterior for high pressure and vacuum resistance.

ARTICLE	OUTER Ø mm	INNER Ø mm	MATERIAL
HP-VZ1480	22	16	PVC hose, steel spiral

Blade Runner®-Connector

Article: HP-VZ1490

Blade Runner®-Conector for the Blade Runner Resin® feed line.

PU Vacuum-Hose - Flexible -

PU hose with high wall thickness and excellent flexibility.
Use as resin-carrying line as well as reusable suction in combination with the vacuum pump HP VZ1200. Multiple use in combination with our connectors IQS standard.

- Small bending radius by special flexibility
- Very good flexibility at low tem- perature and recovery characteristics
- Kink and corrosion proof
- Resistant against aliphatic hydrocarbons and most lubrications
- Non-aging in oxigene and ozone
- Reusable

ARTICLE	OUTER Ø mm	INNER Ø mm	MAX. OPERATION TEMP. °C	SHORE-HARDNESS A	COLOUR	MATERIAL
HP-VZ1030	10	6,5	-35 > +60	97	transparent	Polyurethan
HP-VZ1040	12	8	-35 > +60	97	transparent	Polyurethan

PE Vacuum-Hose - Standard -

The PE-Hose is used in the vacuum-injection (vacuum-infusion) process. It can be used mainly as a disposable product in combination with our connectors POM.

- Low weight
- High impact strength
- Resistancy against acid, alkali and salt solutions
- Mainly used as a disposable product

ARTICLE	OUTER Ø mm	INNER Ø mm	MAX. OPERATION TEMP. °C	SHORE-HARDNESS D	COLOUR	MATERIAL
HP-VZ1010	10	8	-10 > +40	50	nature	Polyethylen
HP-VZ1012	12	10	-10 > +40	50	nature	Polyesthylen

Spiral Tube for Vacuum Infusion

The Spiral Tube is used as a central suction line for the vacuum moulding.
It is fixed on the vacuum bagging film with our Sealant Tape.

ARTICLE	DIAMETER Ø mm Inside	Outside	MAX. OPERATION TEMP. °C	MELTING POINT °C	MATERIAL
HP-ST060	6	8,8	+80	+113	Polyethylen
HP-ST080	8	10,8	+80	+113	Polyethylen
HP-ST100	10	12,8	+80	+113	Polyethylen

IQS-Connectors

The Push-In Connectors (IQS-Standard) serve as connection between the Vacuum-Hoses. They are suitable for Vacuum-Hoses in standard PE and flexible PU.

Technical Data	
Material Body	Plastic/ nickel-plated brass
Material Seal	NBR (nitrile rubber)
Temperature range	0 °C up to +60 °C

ARTICLE	DESCRIPTION	SUITABLE FOR HOSES
HP-VZ1050	Connector -Straight-	with 10mm outer-ø
HP-VZ1060	Connector -Straight-	with 12mm outer-ø
HP-VZ1070	T-Connector	with 10mm outer-ø
HP-VZ1080	T-Connector	with 12mm outer-ø
HP-VZ1090	Connector -Reducing-	for reduction from 12 to 10mm
HP-VZ1100	Connector with Female Thread	with 10mm outer-ø
HP-VZ1110	Connector with Female Thread	with 12mm outer-ø
HP-VZ1120	Y-Connector	with 10mm outer-ø
HP-VZ1130	Y-Connector	with 12mm outer-ø
HP-VZ1140	Lock Valve with Push-In Connector	with 10mm outer-ø
HP-VZ1150	Lock Valve with Push-In Connector	with 12mm outer-ø
HP-VZ1160	Stud to Close	with 10mm inner-ø
HP-VZ1170	Stud to Close	with 12mm inner-ø

Standard-Push-Connector

The Standard-Push-Connector serves for easy and low-priced connection between vacuum-hoses.

Technical Data	
Temperature range	0 °C up to +80 °C

ARTICLE	DESCRIPTION	SUITABLE FOR HOSES
HP-VZ1300	Hose Connector -Straight-	with 8mm inner-ø
HP-VZ1310	Hose Connector -Straight-	with 10mm inner-ø
HP-VZ1320	T-Connector	with 8mm inner-ø
HP-VZ1330	T-Connector	with 10mm inner-ø
HP-VZ1340	Y-Hose Connector	with 8mm inner-ø
HP-VZ1350	Y-Hose Connector	with 10mm inner-ø

Vacuum Pump 220V / 150W

Compact, low-maintenance, slide vane rotary vacuum pump, with circulating oil lubricartion applicable for Vacuum-Compression & Vacuum-Infusion. For components larger than 10m² (depending on the layer structure).
► Ideal for the IMC/MTI®-Process!

Performance Data:
- Max. vacuum: 0,933 bar relative (complies to 20mbar absolute) (correspond to a pressure of more than 10 tons/m²)
- Max. efficency by barometic pressure: 67 litre / min (= 4m³/h)
- Suitable for continuous operating range between 2 and 500 mbar absolute

Equipment:
Vane rotary vacuum pump incl. pulse damper and 220V mains supply.
Suction-sided with check valve, suction filter and two connecting adapters.
Delivered incl. oil and users manual!

Article: HP-VZ1200

Technical Data	
Max. valid gas– and ambience emperature	+12 up to + 40°C
Motor	220 V / 50 Hz
Engine power	150 W
Weight	5,4 kg
Noise level	52 dB(A)
Electrical execution	Protection category IP55

Article: HP-VZ1250
Vacuum Pump Oil HVI32
100 / 500 / 1000ml and 20ltr.

Connecting adapter 1: suitable for vacuum hose HP-VZ1010 & HP-VZ1040

Connection adapter 2: suitable for vacuum hose HP-VZ1020 & HP-VZ1040 (12mm connectors)

You find a current picture in our Online-Shop **www.3D-Gewebe.com**

Standard Manometer for Vakuum

- Manometer standing - class 2.5
- Display area -1 bar to 0 bar (Vacuum)
- Bar-display (black) / PSI-display (red)
- Connection: G 1/4“ below
- Diameter 50mm

Technical Data	
Housing	Plastic
Measuring system, connection, motion work	Brass
Window	Clear plastic
Temperature range ambience	-40°C up to +60°C
Medium	max. +60°C

Article: HP-VZ1180
G1/4“ below
Connection: vertical (below)

Article: HP-VZ1190
G1/4“ at the back
Connection: horizontal (at the back)

Vacuum Pump 220V / 750W

Compact, low-maintenance, slide vane rotary vacuum pump, with circulating oil lubricartion applicable for Vacuum-Compression & Vacuum-Infusion. For components larger than 5m² (depending on the layer structure).
► Ideal for the IMC/MTI®-Process!

Performance Data:
- Max. vacuum: 2mbar absolute (correspond to a pressure of more than 10 tons/m²)
- Max. efficency by barometic pressure: 333 liter/min (=20m³/h)
- Suitable for continuous operating range between 2 and 400 mbar absolute

Equipment:
Rotary vane vacuum pump including 4 vibration dampers pre-assembled on aluminum plate.
220V mains connection including on / off switch.
Suction side equipped with non-return valve, suction filter and two connection adapters including shut-off valve.
Delivery includes vacuum pump oil, operating and maintenance manual!

Connection adapter 1:
PU vacuum line AD = 12mm; ID = 8mm (article: HP-VZ1040)

Connection adapter 2:
PVC suction pressure hose with steel spiral 16x3mm (article: HP-VZ1480)

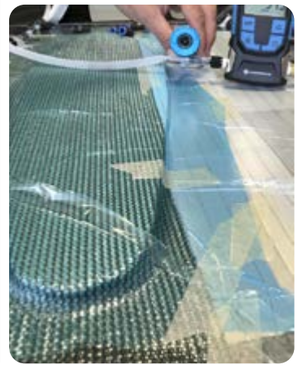
Article: HP-VZ2000

Technical Data	
Max. valid gas– and ambience emperature	+12 up to + 40°C
Motor	220 V / 50 Hz
Engine power	750 W
Weight	19 kg
Noise level	64 dB(A)

Vac Checker® Digital Vacuum Gauge

Article: HP-VZ1440

Technical Data	
Field of application	Vacuum infusion
Storage temperature	-20 bis +50 °C
Operationg temperature	-20 bis +50 °C
Dimensions	250 x 165 x 55 mm
Weight	approx. 500 g
Measuring range	1.100 until 0 mbar
Vacuum resolution	0,01 hPa / 10 micron
Overload	absolut: 6 bar / 87 pis
Measurement transducer	Absolute pressure senso



Attachments:
Connection adapters for pipes with an internal diameter of:
6 / 8 / 10 mm

FLOORCOATING
PRIMING
POND BUILDING
ADHESIVE SYSTEM
MOULD MAKING RESIN
EP-RESIN
GROUNDING
INFUSION RESIN
MEDIUM VISCOUS
POND COATING
GERMANISCHE LLOYD
SEALING
CARBON-LOOK
LAMINATING

EPOXY RESIN SYSTEMS

EPOXY
COVERING RESIN SYSTEM
GELCOAT
LOW VISCOUS
BOATBUILDING
EMBEDDING SYSTEM
CASTING RESIN SYSTEM
STICKING
INJECTIONRESIN
TOPCOAT
LAMINATING RESIN

Epoxy Resin Systems

	DESCRIPTION / SPECIAL FEATURES	PRIMING	LAMINATE	INFUSE	BONDING	SURFACES	CASTING	FILLER		VISCOSITY the **higher**, the **tougher**	MIXING RATIO (weight) Resin / Hardener	COLOUR	POT LIFE (min at 20°C)	TEMPERATURES **Processing min** recommended	TEMPERATURES **Resilience** Tg MAX in C°	PAGE
Priming systems																
HP-UC-...	Priming smooth substrates (plastic, glass, metal, tiles...)	■								■■□□	100 / 50	black -9004 white - 9003	20 - 30	18 (25°C)	n. V.	56
HP-E80FS	Primer for porous substrates (mineral, wood, metal...), dilutable with XB	■	■							■■□□	100 / 60	browny	35	**15** (20°C)	n. V.	56
Filler system																
HP-E30S	Filled filler system for e.g. osmosis remediation							■		■■■■	100 / 50	light green - matt	30	**15** (20°C)	115°C	57
Adhesive systems																
HP-E5K	High-quality 5min epoxy resin for bonding & adding components				■					■■■□	100 / 100	browny	5	**5** (20°C)	80°C	58
HP-E60K	Epoxy resin with long pot life for large-area bonding / adding, slightly tacky on air side				■					■■■□	100 / 50	browny	60	**15** (20°C)	60°C	
HP-E120K					■					■■■□	100 / 50	browny	120	**15** (20°C)	80°C	
Laminating systems																
HP-E28L	Low viscosity impregnating & laminating resin for many applications		■		■					■■□□	100 / 40	transparent blue	28	**15** (20°C)	75°C	59
HP-E55L			■		■					■■□□	100 / 40	blue	55	**18** (20°C)	81°C	
HP-E110L			■		■					■■□□	100 / 40	blue	110	**18** (20°C)	75°C	
HP-E29L	High-load resins, improved physiological compatibility		■	■	■					■■□□	100 / 40	light bluish	25	**15** (20°C)	93°C	60
HP-E56L			■	■	■					■■□□	100 / 40	light bluish	55	**18** (20°C)	90°C	
HP-E111L			■	■	■					■■□□	100 / 40	light bluish	110	**20** (20°C)	79°C	
HP-E30TLS	Laminating resin for pond and pool coatings		■		■					■■□□	100 / 60	light bluish	30	**15** (20°C)	50°C	68
Topcoat systems																
HP-E25D	Topcoat with improved UV resistance, as first (fine) layer in negative moulds, visible carbon, osmosis protection, forms clear, tack-free surfaces		■			■				■□□□	100 / 60	colourless	25	**10** (20°C)	45°C	70
HP-E25DM			■			■				■■■□	100 / 60	colourless	25	**10** (20°C)	69°C	
HP-E40D			■			■				■□□□	100 / 50	colourless	40	**10** (20°C)	48°C	
HP-30TDS	Transparent or coloured according to RAL, floor, agricultural and industrial coatings, pond, pool and boat coatings [2]					■				■■■■	100 / 53	colourless or	30	**15** (20°C)	50°C	69
High-heat resistant systems																
HP-E120WSM	High thermal stability, multi-purpose system, good resistance to fuels		■	■			■			■■■□	100 / 26	very transparent[1]	120	**18** (20°C)	150°C	64
HP-E120WSI	High heat resistance / particularly suitable for vacuum injection processes (IMC/MTI, RI, VARI,...) Exposed carbon		■	■			■			■□□□	100 / 26	very transparent[1]	120	**18** (20°C)	125°C	63

■ = very well suited ■ = suitable ■ = conditionally suitable □ = not suitable

■□□□ very thin liquid ■■□□ liquid ■■■□ viscous ■■■■ pasty

n.a. = values not available

[1] = depending on the chosen hardener

[2] = Depending on the shade, colour change / chalking possible under sunlight!

Rev. 3.8

Epoxy Resin Systems

Epoxy Resin Systems

	DESCRIPTION / SPECIAL FEATURES	PRIMING	LAMINATE	INFUSE	BONDING	SURFACES	CASTING	FILLER		VISCOSITY the **higher**, the **tougher**	MIXING RATIO (weight) Resin / Hardener	COLOUR	POT LIFE (min at 20°C)	TEMPERATURES **Processing min** recommended	TEMPERATURES **Resilience** Tg MAX in C°	PAGE
Multi-purpose systems																
HP-E25L	Multi-purpose, unfilled mould making/filling system, chemical resistant									■■■□	100 / 60	light yellow	25	**5** (20°C)	55°C	**62**
HP-E25KL										■■■□	100 / 60	light yellow/clear	25	**5** (20°C)	78°C	**61 / 82**
HP-E45L										■■■□	100 / 60	light yellow	45	**18** (20°C)	50°C	**62**
HP-E45KL										■■■□	100 / 60	light yellow/clear	45	**15** (20°C)	66°C	**61 / 82**
HP-E25TU	Laminating and topcoat resin for desert terrariums, suitable for UV lamps									■■□□	100 / 60	light yellow/clear	25	**10** (20°C)	69°C	71
HP-E25TMU										■■■□	100 / 60	light yellow/clear	25	**10** (20°C)	45°C	
HP-E45T	Laminating and covering resin for terrariums, paludariums									■■□□	100 / 60	light yellow/clear	45	**15** (20°C)	50°C	
HP-E45TM	Laminating and topcoat resin for terrariums, paludariums, aquariums, also marine aquariums									■■■□	100 / 60	light yellow/clear	45	**15** (20°C)	66°C	
Injection systems																
HP-E15GL	Infusion resin system, RTM process, optimum impregnation and flow properties, very transparent - visible carbon									■□□□	100 / 30	very transparent[1]	15	**10** (25°C)	91°C	66
HP-E200GL										■□□□	100 / 30	very transparent[1]	200	**15** (25°C)	107°C	
HP-E300GL										■□□□	100 / 30	very transparent[1]	300	**15** (25°C)	92°C	
HP-E30RI	Infusion resin system, RTM / RI process, optimum impregnation and flow properties, transparent - visible carbon									■□□□	100 / 30	transparent[1]	35	**15** (25°C)	90°C	65
HP-E120RI										■□□□	100 / 30	transparent[1]	200	**15** (25°C)	98°C	
HP-E300RI										■□□□	100 / 30	transparent[1]	300	**15** (25°C)	83°C	
Casting systems																
HP-E45GB	High impact strength, residual flexibility									■■□□	100 / 60	transparent	45	**15** (20°C)	50°C	89
HP-E50GB	Transparent, low-shrinkage potting with tack-free surfaces Pouring heights < 1.5 cm, water clear									■□□□	100 / 50	transparent (colourless)	40	**10** (20°C)	50°C	86
HP-E300GB	Transparent, low-shrinkage potting with tack-free surfaces Pouring heights < 5 cm / 20°C, ideal for river tables									■□□□	100 / 35	transparent (carbon-look)	300	**18** (20°C)	45°C	87
HP-E400GB	Transparent, low-shrinkage casting with tack-free surfaces, crystal clear, casting heights < 10 cm, ideal for River-Table's									■□□□	100 / 30	transparent	300	**15** (20°C)	40°C	
HP-E45GA	Electric casting up to 48V, casting heights < 2 cm / 20°C									■■■□	100 / 60	light yellow/clear	45	**15** (20°C)	67°C	88
HP-E45GE	Electric casting up to 400V									■■□□	100 / 60	transparent	45	**15** (20°C)	50°C	91
Mould making systems																
HP-E25FB	Mould making resin with high grinding and polishing properties									■■■■	100 / 50	dyeable with colour pastes	25	**15** (20°C)	65°C	83
HP-E30FB	Moulding resin with high abrasion resistance, black or blue-grey, aluminium-filled									■■■■	100 / 10	black or blue-grey	30	**15** (20°C)	115°C	84

= very well suited **= suitable** **= conditionally suitable** **= not suitable**

■□□□ very thin liquid ■■□□ liquid ■■■□ viscous ■■■■ pasty

n.a. = values not available

[1] = depending on the chosen hardener

Rev. 3.8

Epoxy Resin Systems

PUR-Priming Resin for EP-Resins · HP-UC

HP-UC-9003 and HP-UC-9004 are a two component polyurethane primer/adhesion for applications with epoxy resins. Especially suitable for smooth, non absorptive suboils (many plastics, glass, metals, tiles, …)

Characteristics:

- PUR primer for sticking or laminating on smooth surfaces
- High adhesion, suitable for all Epoxy Resins from HP-Textiles
- Black ground coat (primer for carbon design)
- For spraying, manual application with a paint-brush or a roller is also possible
- Wax free, without styrene

Product Properties:			Resin	Hardener	Method
			HP-UC		
Colouring			black or white		
Mixing ratio (weight)		*weight*	100	50	
Mixed viscosity			low viscosity		
Pot life	(at 20°C)	*days*	20 - 30		
Can be laminable	(at 20°C)	*hours*	24		
Theoretical consumption		*g/m²*	80 - 150		

Technical Data Sheet

EP-Priming Resin for EP-Resins · HP-E80FS

The epoxy system HP-E80FS is an unfilled, low viscous combination of resin and hardener with high adhesion to mineralized / porous foundations.

Characteristics:

- Very good wetting
- Causes tacky-free surface
- Osmosis protection, filler for wooden porosities, water barrier layer
- Primer / Adhesion Promoter for several surfaces
- Corrosion Prevention for metal / aluminium (bare)

Technical Data Sheet

Online Shop

Product Properties:			Resin	Hardener	Method
			HP-E80FS		
Colouring			yellowish		
Mixing ratio (weight)		*weight*	100	60	
Mixing ratio (volume)		*volume*	100	68	
Mixed viscosity			low viscosity		
Pot life	(at 20°C)	*days*	35		

Epoxy-Filler · HP-E30S

The Epoxy-System HP-E30S is a filled two component combination of resin and hardener with fine extenders.

Features and Benefits:

- Very good adhesion to wood, steel, polyester and other surfaces provided with suitable primers
- Water vapour impermeable
- Resistant to various chemicals
- Among others, usable for osmosis treatment
- Easy to sand
- Semi-flexible
- Suitable for permanent immersion in (sea) water
- Dust dry after approx 120min

Product Properties:			Resin	Hardener
			HP-E30S	
Colouring			Light green - mat	
Mixing ratio		*weight*	100	50
Mixed viscosity	(at 20°C)		pasty	
Pot life	(at 20°C)	*minutes*	30	
Dust dry	(at 20°C)	*hours*	2	
Recoating interval	(at 20°C)	*hours*	48	
Recoating interval	(at 25°C)	*hours*	24	

Technical Data Sheet

Online Shop

Epoxy Adhesive System ▪ HP-E5K / -E60K / -E120K

Kleben

The Epoxy Adhesive Systems HP-E5K, HP-E60K and HP-E120K are an unfilled medium-viscous combination of resin and hardener.

Characteristics:

- Applicable for metal, wood, rubber, ceramics, rigid foams and many other plastic materials
- Cold-hardening, workable at room-temperature
- Possible to add fillers
- Tough-hard formulation
- Fast-setting epoxy for high-performance applications

Product Properties:			Resin	Hardener		
				HP-E5K	HP-E60K	HP-E120K
Mixing ratio		*weight*	100	100	50	50
Mixed viscosity			medium viscous			
Pot life	(at 20°C)	*minutes*		**5**	**60**	**120**
Hand tight	(at 20°C)	*minutes*		10		
Minimum hardening time	(at 20°C)	*hours (h)*		**2**	**24**	**24**
Processing temp. (optimum)		°C		15 - 25		

Technical Data Sheet

Online Shop

Standard Laminating Resin ▪ HP-E28L / -E55L / -E110L

Laminieren Kleben

The Epoxy-Systems HP-E28L, HP-E55L and HP-E110L are unfilled, low viscous 2-component combinations of resin and hardeners with various processing times between 28 - 110 minutes.

Characteristics:

- Very good wetting properties of the reinforcing fibres
- Cold setting, de-mouldable at room temperature
- Free of solvents and fillers
- Improved physiological compatibility (no R62 labelling)
- Practically shrink-free curing
- Temperature resistance (Tg Max) **up to 81°C (HP-E55L)**

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www.masterart-helis.de

Product Properties:			Resin	Hardener			Method
				HP-E28L	HP-E55L	HP-E110L	
Colouring				Slightly bluish / green			
Mixing ratio		*weight*	100	40			
Mixed viscosity		*minutes*	low viscous				
Pot life	(at 20°C)	*minutes*		**28**	**55**	**110**	
Demouldable after	(at 20°C)	*hours (h)*		28	36	56	
Demouldable after	(at 40°C)	*hours (h)*		6 - 7	8	10	
Processing temperature optimal		*°C*		15 - 25	20 - 25	20 - 25	
Processing temperature minimal		*°C*		15	18	18	

Technical Data Sheet

Online Shop

High Strength Thermosetting Resin ▪ HP-E29L / -E56L / -E111L

The Epoxy-Systems HP-E29L, HP-E56L and HP-E111L are unfilled, low viscous 2-component combinations of resin and hardeners with various processing times between 25 - 110 minutes. Compared to standard resins our high performance resins show faster curing processes.
The laminates have distinctive static and dynamic strengths and a higher temperature resistance.

Characteristics:

- Very good wetting properties of the reinforcing fibres
- Cold setting, demouldable at room temperature
- Free of solvents and fillers
- Improved physiological compatibility (no R62 labelling)
- Practically shrink-free curing
- Temperature resistance (Tg Max) **up to 93°C (HP-E29L)**
- Special formulation supports **faster curing** and increased strength, especially at higher temperatures
- Individual colouring is available upon request
- Excellent adhesion to the In-Mould Coating of HP-Textiles
- In total better characteristic values of approx. 10% (Tg MAX, tensile strength etc.) than those of standard systems!

Product Properties:		Resin	Hardener			Method
			HP-E29L	HP-E56L	HP-E111L	
Colouring		colourless	light blue-green			
Mixing ratio	*weight*	100	40			
Mixed viscosity	*minutes*	low viscous				
Pot life (at 20°C)	*minutes*		**25**	**55**	**110**	
Demouldable after (at 20°C)	*hours (h)*		24	30	48	
Demouldable after (at 40°C)	*hours (h)*		6	7	9	
Processing temperature optimum	*°C*		15 - 25	20 - 25	20 - 30	
Processing temperature minimum	*°C*		15	18	20	

Technical Data Sheet

Online Shop

Epoxy Multi-purpose Resin Systems ▪ HP-E25KL / -45KL

The Epoxy Laminating Resin Systems HP-E25KL and HP-E45KL are unfilled, medium-viscous, chemical resistant combination of resin and hardener with short or medium processing time (pot life).

They can be used as general-purpose systems for many applications:

as Laminating Resin:

- Excellent wet-out of fibreglass, carbon and aramid fibres
- Cold-hardening, medium-viscosity, **HP-E25KL: used from 5°C**

as Mould Resin:

- Usable as mould making resin (mixable with colour pigments)
- For coupling-layers (with fillers)

as Covering Layer Resin:

- Clear, tack-free surface
- Usable for repairs / refit of osmosis damages
- High resistance to many chemicals such as styrene, fuels, ...
- Therefore, they can be used for coatings in tanks, pipelines, ponds and terrariums

as Adhesive Resin or basic for Fillers:

- Due to a good adhesion for bonding / fillers can be added (e. g. combination of HP-PK22 and HP-BF1)

The special formulation allows the usage under difficult conditions (low temperatures, air humidity).

HP-E25KL / HP-E45KL are also free of nonylphenol and contain no reactive diluents!

Please note: HP-E25KL and HP-E45KL come with a similar resin.
Both hardeners can be mixed among themselves.

Product Properties:		Resin	Hardener	
			HP-E25KL	HP-E45KL
Colouring		colourless	light blue-green	
Mixing ratio	*weight*	100	60	
Mixed viscosity (at 20°C)	*mPa s*	2500 - 3500 (medium viscous)		
Pot life (at 20°C)	*minutes*		**25**	**45**
Demouldable after	*h*		<18	<30
Processing temperature (optimum)	*°C*		15 - 25	20 - 25
Processing temperature (minimum)	*°C*		**5**	**15**

Technical Data Sheet

Online Shop

Multi-purpose Resin System ▪ BM-E25L / BM-45L

The epoxy resin multi-purpose systems BM-E25L and BM-E45L are unfilled, low viscous 2 components combinations of resin and hardener with a working time of approx. 25 / 45 min for laminate, top coat, adhesive, spatula and mould making applications.

as Laminating Resin:

- Very good wetting if reinforcement fibres are rough
- For clear and sticky free surfaces

as Mould Resin:

- As hard-elastic mould making system (adjustable with colour pigments)
- Applicable for coupling layers (with fillers)

as Covering Layer Resin:

- High resistance to chemicals, e.g. styrene, fuels
- Also applicable for coatings of tanks, pipelines or containers
- For clear and sticky free surfaces

as Adhesive Resin or basic for Fillers:

- Due to its very high adhesive strength also applicable for adhesive or spatula use (e.g. in combination with thixotropic agents PK22 and cotton flocks BF1)

Due to its special formulation, the system can also be processed under difficult circumstances. It is impervious to intermediate reactions (e.g. amine redness).

note:
All raw materials are free of nonylphenol!

Product Properties:			Resin	Hardener		Method
				BM-E25L	BM-E45L	
Mixing ratio		*weight*	100	60		
Mixed viscosity			low viscous			
Pot life	(at 20°C)	*minutes*		**25**	**45**	
Demouldable after		*h*		48		
Processing temperature (optimum)		*°C*		7		
Processing temperature (minimum)		*°C*		**5 - 25**	**18 - 25**	

BM-E25L
Technical Data Sheet

BM-E45L
Technical Data Sheet

Online Shop

High Heat Resistant Epoxy System ▪ HP-E120WSI

The Epoxy System HP-E120WSI is an unfilled, low viscous, 2-component combination of resin and hardener. It can be used as a laminating and vacuum-infusion resin system for a high temperature stabilities.

Features and Benefits:

- very low viscosity, excellent fibre wet-out and flow properties
- high static and dynamic strength
- very good dimensional stability under heat up to 125°C
- **hot curing, post cure is necessary**
- **usable as a laminating and vacuum-infusion resin** (IMC/MTI, RI, VARI,…)
- building of high heat resistant components
- production of composites made of glass-, carbon - or aramid fabrics
- optical application such as visible carbon parts
- colourless, clear

Product Properties:			Resin	Hardener	Method
			HP-E120WSI		
Mixing ratio		*weight*	100	26	
Mixed viscosity	(at 20°C)		low viscous		
Pot life	(at 20°C)	*minutes*	120		
Pot life	(at 25°C)	*minutes*	80		
Post cure		*°C*	24h / 20°C // 5h / 60°C // 6h / 80°C // 2h / 120°C rise of temperatur 20°C /h * extra curing 2h / 160°C		

Technical Data Sheet

Online Shop

High Heat Resistant Epoxy System ▪ HP-E120WSM

The Epoxy System HP-E120WSM is an unfilled, medium viscous, 2-component combination of resin and hardener. It can be used as a laminating resin system for a high temperature stabilities.

Features and Benefits:

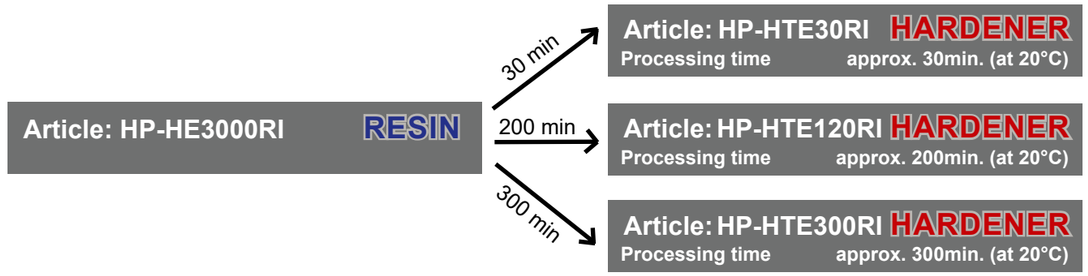
- very good wetting of the reinforcement fiber
- high static and dynamic strength
- **very good dimensional stability under heat up to 150°C**
- good resistance to fuels
- **hot curing, post cure is necessary**
- special laminating- and multipurpose resin
- building of high heat resistant components
- usable for mould and tool making
- production of composites made of glass-, carbon- or aramid fabrics
- optical application such as visible carbon parts

Product Properties:			Resin	Hardener	Method
			HP-E120WSM		
Mixing ratio		*weight*	100	26	
Mixed viscosity	(at 20°C)		medium viscous		
Pot life	(at 20°C)	*minutes*	120		
Pot life	(at 25°C)	*minutes*	80		
Post cure		*°C*	24h / 20°C // 5h / 60°C // 6h / 80°C // 2h / 120°C rise of temperatur 20°C /h * extra curing 2h / 160°C		

Technical Data Sheet

Online Shop

Infusion-Resin / Laminating Resin



The Base of the series HP-E3000RI is an unfilled Epoxy-Resin, which is mixable with different hardeners for several applications.
The hardeners HP-E30RI and HP-E300RI allow pot-life times between 30 and 300 minutes.
Furthermore, the special hardener HP-E120RI provides higher temperature stabilities.

Characteristics:

- Excellent wet-out in infusion- or injection-processes
- Warm-hardening, demouldable at higher temperature
- High dynamic and static strength
- Usable for RTM / RI - process
- For application in modelmaking, automotive-industry and building of boats and rotor blades
- Glass transition temperature 98 °C (with hardener HP-E120RI)
- With thixotroping agent HP-PK22 applicable for hand-laminating

Product Properties:			Resin	Hardener			Method
			HE3000RI	HTE30RI	HTE120RI	HTE300RI	
Colour			colourless	colourless / slightly amber			
Colour		*gardner*	< 2	< 2			
Mixing ratio		*weight*	100	30			
Pot life	(at 20°C)	*minutes*		**35**	**200**	**300**	
Processing temperature optimum		*°C*		20 - 25	20 - 30	20 - 30	

Data of unfilled samples. Curing schedule with hardener :		
HP-E30RI	*h at °C*	24h/20°C, and 5h/60°C and 6h/80°C
HP-E300RI	*h at °C*	24h/20°C, and 5h/60°C and 6h/80°C
HP-E120RI	*h at °C*	24h/20°C, and 5/60°C und 6h/80°C and 2h/120°C

Technical Data Sheet

Online Shop

Infusion-Resin / Laminating Resin

Article: HP-HE3000GL **RESIN**

15 min → Article: HP-HTE15GL **HARDENER**
Processing time approx. 15min. (at 20°C)

200 min → Article: HP-HTE200GL **HARDENER**
Processing time approx. 200min. (at 20°C)

300 min → Article: HP-HTE300RGL **HARDENER**
Processing time approx. 300min. (at 20°C)

The basis of the series HP-E3000GL is an unfilled Epoxy-Resin, which is mixable with different hardeners for every individual purpose. A special feature of this series is a high initial glass transition temperature (Tg) by hardening at room temperature.

The use of the hardener HP-E200GL increases the maximum glass transition temperature (Tg MAX) up to 107°C. The series also has a high transparency, so that it is very suitable for visible carbon parts.

Characteristics:

- Extremely low viscosity, so it has a very good fibre wet-out
- High static and dynamic strength
- Pot life time can be freely adjusted between 15 min hardener (HP-E15GL) and 300 min (hardener HP-E300GL)
- Glass transition temperature (Tg max) up to 107 °C (hardener HP-E200GL)

Product Properties:		Resin	Hardener			Method
		HE3000GL	HTE15GL	HTE200GL	HTE300GL	
Colour		colourless	yellowish	colourless, clear		
Colour	*gardner*	< 1	< 5	< 1	< 1	
Mixing ratio	*weight*	100	30	30	30	
Pot life (at 20°C)	*minutes*		**15**	**200**	**300**	
Processing temperature optimum	*°C*		20 - 25	20 - 30	20 - 30	

Data of unfilled samples. Curing schedule with hardener :		
HP-E30RI	*h at °C*	5h/60°C and 6h/80°C
HP-E300RI	*h at °C*	5h/60°C and 6h/80°C
HP-E120RI	*h at °C*	5h/60°C and 6h/80°C (and for Tg max. 2h/120°C)

Technical Data Sheet

Online Shop

Epoxy Resin Systems

DeinTeich.de
Teich Pool Dach

Structure of a high-quality GRP coating with epoxy resin:

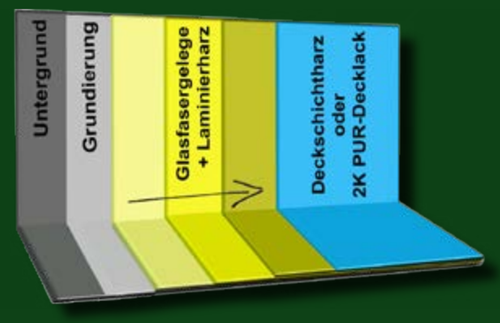
1. **Substrate (mineral):**
Concrete, plaster, screed, masonry, ...

2. **Primer:**
Epoxy Resin **HP-E80FS**
Barrier layer against moisture and at the same time bonding agent

3. **Laminate:**
Epoxy Laminating Resin **HP-E30TLS**
Glass fibre **HP-B320E, HP-B450E**

4. **Protective coat:**
PUR-Top Coat **HP-PUR-PLUS**
Very good water & chemical resistance, high UV resistance

Structure of Laminate:



HP-PUR-PLUS
Available in all RAL colours

More info about HP-PUR-PLUS on pages 102 - 103

Do you have any further questions about the choice of material, the processing or do you need a non-binding offer?

We are here for you!

- **Phone** +49 (0) 5905 - 945 41 10
- **Mail** info@deinteich.de
- **Or on site after appointment**

Covering and Laminating Epoxy-System ▪ HP-E30TLS

The Epoxy-System HP-E30TLS is an unfilled two-component combination of resin and hardener with medium working time (pot life). It is versatile for surface coatings and laminating.

Features and Benefits:

- good wet-out of reinforcement fibres
- very good mechanical and chemical properties
- Universally suitable for pre-sealing or / and laminating of fibre reinforced surface coating in system configuration between primer (HP-E80FS) and topcoat (HP-E30TDS)

- Completely free of solvents, therefore
  - direct working on PU- or PS/EPS foam is possible
  - suitable for indoor use (fish ponds, pools, tanks,…)

- Using for tough, high quality, fibre reinforced coatings in following:
  - outdoor AND INDOOR swimming pools, water tanks, fish and aquaculture ponds
  - roofs and rooftops
  - balcony sealing
  - agricultural and industrial coantings

For best results, we recommend a finish with a suitable epoxy-topcoat (like HP-E30TDS)!

Product Properties:			Resin	Hardener	Method
			HP-E30TLS		
Mixing ratio		*weight*	100	60	
Mixed viscosity	(at 20°C)		low viscous		
Pot life	(at 20°C)	*minutes*	30		
Walkable after	(at 20°C)	*hours*	**24**		
Walkable after	(at 15°C)	*hours*	48		
Processing temperature (optimum)		*°C*	20 - 25		
Processing temperature (minimum)		°C	15		

Technical Data Sheet

Online Shop

Coating and Laminating Epoxy-System ▪ HP-E30TDS

The Epoxy-System HP-E30TDS is a filled and thixotropic two-component combination of resin and hardener with medium working time (pot life). It is versatile for high quality surface coatings.

Features and Benefits:

- sealing for wood, metal, several plastics (especially frp), screed and concrete
- very good adhesive properties, high abrasion-reasistance
- very high chemical and mechanical resistance
- distinct osmosis protection
- free of solvents, can be thinned with HP-XB if demanded (maximum up to 5%)

- Used as high quality surface coating in following areas:
  - boatbuilding (especially for osmosis protection underwater)
  - outdoor and indoor swimming pools, water tanks, fish and aquaculture ponds
  - roofs and rooftops
  - balcony sealing
  - agricultural and industrial coantings
  - as surface for low temperature moulds (< 50°C)

Available in several colours.

By adding the colour paste HP-FP (page 165) it is colour-adjustable!

In order to achieve best results we recommend the use in combination with our primer / sealer (HP-E80FS) and / or laminating resin (HP-E30TLS).

Product Properties:			Resin	Hardener	Method
			HP-E30TDS		
Mixing ratio		*weight*	100	53	
Mixed viscosity	(at 20°C)				
Pot life	(at 20°C)	*minutes*	30		
Walkable after	(at 20°C)	*hours*	**24**		
Walkable after	(at 15°C)	*hours*	48		
Processing temperature (optimum)		*°C*	20 - 25		
Processing temperature (minimum)		*°C*	15		

Technical Data Sheet

Online Shop

** The epoxi system HP-E30TDS has a low yellowing potential. Under UV, chlorine and weather conditions (such as increased outside temperatures) are epoxy resins generally not completely color-stable over the long term. **

** To increase the color stability, we recommend using an additional transparent topcoat HP-E30TDS-0000 incl. Approx. 3% UV stabilizer HP-BEL91. These products can be ordered optionally.**

Covering Resin Systems ▪ HP-E25D / -E40D / -25DM

The Epoxy Topcoat Systems HP-E25D, HP-E40D and HP-E25DM are unfilled, low-viscous combinations of resin and hardener with higher UV-resistance.

Characteristics:

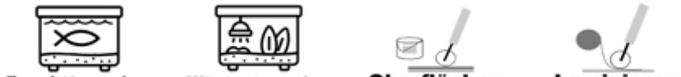
- Sealing for metal, wood, plastics, concrete, screed
- Causes clear, non-gluey surfaces
- Higher resistance to UV radiation, low tendency to yellowing
- Excellent mechanical properties, high impact strength
- Osmosis protection, filler for wooden porosities
- Carbon Look Laminates
- Water barrier layer, surface protection, varnish
- **By adding the colour paste HP-FP (page 69) it is colour-adjustable!**

Product Properties:			Resin			Hardener		
			HP-E25D	HP-E40D	HP-E25DM	HP-E25D	HP-E40D	HP-E25DM
Colouring			without colour / transparent					
Mixing ratio	(at 20°C)	*weight*	100			60	50	60
Mixing ratio	(at 20°C)	*volume*	100			64	57	66
Mixed viscosity						low		medium
Pot life	(at 20°C)	*minutes*				25	40	25
Walkable	(Shore D 40 after)	*h*				12	15	8
Processing temperature (minimum)		*°C*				10		

Technical Data Sheet

Online Shop

Epoxy-System for Aquariums and Terrariums



Our terrarium / aquarium systems have been developed specifically for the use in these areas. The sealed surfaces are impact, scratch and bite resistant. The result is a waterproof barrier which can be easily cleaned and disinfected. A nesting of bacteria and pathogens into the ground is prevented.

Features and Benefits:

As Laminating and Covering System

- Good wetting of the reinforcing fibres
- Make clear and tack-free surface
- Cold curing
- Good strength

- Sealing of metal, wood, various plastics and mineral substrates
- High surface protection, excellent hygiene and water barrier
- High impact resistance

Technical Data Sheet

Aquarium and Terrarium Systems Compared:

Field of Application:	**Humid Terrariums Aquariums, paludariums**		**Desert Terrariums high UV-resistance**	
Underground	**low viscous** for hard surfaces (OSB, stone, …)	**medium viscous** for soft or non-porous surfaces (Styrofoam, …)	**low viscous** for hard surfaces (OSB, stone, …)	**medium viscous** for soft or non-porous surfaces (Styrofoam, …)
Article	**HP-E45T**	**HP-E45TM**	**HP-E25TU**	**HP-E25TMU**
Others		Also suitable for **saltwater aquariums**	Suitable for **the use of UV lamps**	

E = Epoxy Resin Systems; T = Terrarium system; M = medium viscous; U = at higher UV load

Product Properties:			HP-E45T	HP-E45TM	HP-E25TU	HP-E25TMU
Colour			light yellow / clear			
Mix ratio	(resin : hardener)	*weight*	100:60	100:60	100:60	100:60
		volume	100:66	100:70	100:64	100:66
Mixed viscosity	(at 20°C)	*mPa s*	low viscous	medium viscous	low viscous	medium viscous
Pot life	(at 20°C)	*minutes*	45	45	25	25
Tack-free		*hours*	48	48	24	24
Processing temperature (optimum)		*°C*	20	20	20	20
Processing temperature (minimum)		*°C*	15	15	10	10
Consumption as a sealing (unreinforced, unfilled)		*g/m²*	approx 400g/m² (in two coats)			

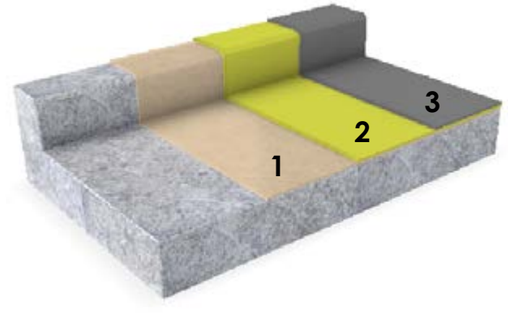
Overview Epoxy Resin Systems - Building chemistry

Products	PRIMING	FILLING	COATING	PROTECT	SEALING		FEATURES	CHEMICAL RESISTANCE	VISCOSITY the **higher**, the **thicker**	POT LIFE min. at 20°C	TEMPERATURES … processing minimum(recommended)	 … loadability (Tg MAX in °C)
HP-E35GS ***2K Epoxy Primer***	++	-	-	-	-		Priming of mineral / porous substrates, + XB thinner for deep impregnation. **Water barrier layer**	high	low	35	10 (20°C)	150 - 250 g/m²
HP-E30S ***2K Epoxy Filler***	-	++	-	-	-		Filler with fine fillers, **grindable, semi-flexible**	high	pasty	30	**15** (20°C)	as needed
HP-E30RB ***2K Epoxy Roll Coating***	-	-	++	++	-		Floor and wall coating, **brushable & rollable, high abrasion resistance, easy to clean**	very high	viscous	30	**15** (20°C)	400 - 600 g/m²
HP-E30VB ***2K Epoxy Levelling Coating***	-	-	++	++	-		Floor and wall coating, **self-levelling, high abrasion resistance, easy to clean**	very high	viscous	30	**15** (20°C)	2 - ≥ 5 kg/m²
HP-E40KS ***2K Epoxy Corrosion protection***	-	-	-	++	++		Very good chemical resistance, **protection against many acids / alkalis**	very high	viscous	30	15 (18 - 25°C)	250 - 400 g/m²
HP-EW60F ***2K Epoxy Paving joint mortar***	-	-	-	-	++		Paving grout, **Mudding method**	high	medium viscosity	60	15 - 25 °C	2kg to 25kg sand with approx. 0.7 - 1.3mm grain size

++ = very good applicable + = applicable o = conditionally applicable - = not provided

Rev. 22.03

	System structure	Article	Consumption
1	Primer	E35GS	ca. 150 - 250 g/m²
2	Roll Coating	E30RB	ca. 400 - 600 g/m²



	System structure	Article	Consumption
1	Primer	E35GS	ca. 150 - 250 g/m²
2	Filler System	E30S	As needed
3	Levelling Coating	E30VB	ca. 2 - ≥ 5 kg/m²

Epoxy Resin Systems

phone: +49 (0) 5905-9459870 www.hp-textiles.com mail: info@hp-textiles.com

Epoxy Primer ▪ HP-E35GS

Grundieren

The Epoxy System HP-E35GS is an unfilled, low-viscosity combination of resin and hardener with high adhesion to several surfaces.

Features and Benefits:

- Water barrier
- Deep impregnation
- Pore filling
- Solidifies underground
- High adhesion even on damp substrates
- Substrate preparation in system setup with E30RB or E30VB

Product Properties:			Resin	Hardener	Method
			HP-E35GS		
Colouring			Amber		
Mixing ratio		*weight*	100	60	
			+10% Thinner HP-XB		
Mixed viscosity			low viscosity		
Pot life	(100g at 20°C)	*minutes*	35		
Jellying time after approx.	(at 23°C)	*hours*	2 - 3		
Recoating after approx.	(at 20°C)	*hours*	8, maximal 24		
Processing temperature	(minimal)	*°C*	10		
Processing temperature	(optimal)	*°C*	18 - 25		
Consumption		*kg/m²*	approx. 100		

Technical Data Sheet

Online Shop

Epoxy Filler ▪ HP-E30S

Spachteln

The epoxy filler HP-E30S is a filled two component combination of resin and hardener with fine extenders. This filler has very good adhesion to wood, steel, polyester and other surfaces. HP-E30S is solvent-free and therefore low unpleasant odour. Further more this epoxy filler is suitable for permanent immersion in (sea) water.

Features and Benefits:

- Very good adhesion to wood, steel, polyester and other surfaces provided with suitable primers
- Water vapour impermeable
- Resistant to various chemicals
- Among others, usable for osmosis treatment
- Easy to sand
- Semi-flexible
- Suitable for permanent immersion in (sea) water
- Dust dry after approx. 120min

Product Properties:			Resin	Hardener	Method
			HP-E30S		
Colouring			Light green - mat		
Mixing ratio		*weight*	100	50	
Mixed viscosity			pasty		
Pot life	(100g at 20°C)	*minutes*	30		
Dust dry after	(at 20°C)	*hours*	2		
Recoating interval	(at 20°C)	*hours*	48		
Processing temperature	(minimal)	*°C*	15		
Density		*g/cm³*	approx. 1,5 (mixed)		
Solid Content		*%*	approx. 100		
Flash Point (DIN 53213		*°C*	> 100		

Technical Data Sheet

Online Shop

Epoxy Resin Systems

Roller Coating Epoxy-System ▪ HP-E30RB

Grundieren

RAL 7032

The Epoxy-System HP-E30RB is a coloured (similar to RAL 7032 pebbly grey), solvent-free and filled two-component combination of resin and hardener with medium working time (pot life) suitable for high quality floor and wall coatings

Features and Benefits:

- Spreadable and rollable coating mass for **floor and wall coatings**
- **Very good adhesive properties**, high abrasion-resistance (in combination with our primer/sealer HP-E80FS)
- If needed, anti-slip material can be added. Please refer to the data sheet for further information
- **High mechanical strength and chemical resistance**
- **High quality surface**, easy to clean
- **Free of solvents**, can be thinned with HP-XB upon demand (maximum up to 5 %)
- Coloured, similar to **RAL 7032 pebble grey**, more colours upon request
- Average consumption is between 0,4 - 0,6 kg/m² per layer
- Free of substances of very high concerns (SVHC)

Applicable on cement bonded surfaces:

- For coatings of new and slightly porous surfaces
- High quality surface finishing for walls and floors indoors and outdoors

Product Properties:			Resin	Hardener	Method
			HP-E30RB		
Mixing ratio		*weight*	100	22	
Mixed viscosity	(at 20°C)		viscous (self-leveling)		
Pot life	(at 20°C)	*minutes*	30		
Walkable after	(at 20°C)	*hours*	**24**		
Walkable after	(at 15°C)	*hours*	48		
Processing temperature (optimum)		°C	20 - 25		
Processing temperature (minimum)		°C	15		

Technical Data Sheet

Online Shop

Levelling Coating Epoxy-System ▪ HP-E30VB

Oberflächen

RAL 7032

The Epoxy-System HP-E30VB is a coloured (similar to RAL 7032 pebbly grey), solvent-free and filled two-component combination of resin and hardener with medium working time (pot life) suitable for high quality floor coatings.

Features and Benefits:

- **Self-levelling coating mass**
- **Very good adhesive properties**, high abrasion-resistance (in combination with our primer/sealer HP-E80FS)
- **High mechanical strength and chemical resistance**
- **High quality surface**, easy to clean
- **Free of solvents**
- Coloured, **similar to RAL 7032 pebble grey**, more colours upon request
- Average consumption is between 2,0 till ≥ 5,0 kg/m² (Coverage per surface-condition)
- Free of substances of very high concerns (SVHC)

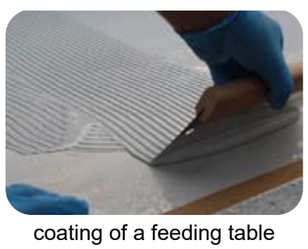
Applicable on cement bonded surfaces:

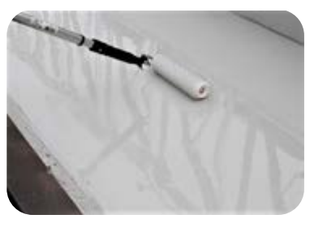
- For filling and smoothing of damaged floor areas
- High quality surface finishing indoors and outdoors

Product Properties:			Resin	Hardener	Method
			HP-E30VB		
Mixing ratio		*weight*	100	17	
Mixed viscosity	(at 20°C)		highly viscous (self-leveling)		
Pot life	(at 20°C)	*minutes*	30		
Walkable after	(at 20°C)	*hours*	**24**		
Walkable after	(at 15°C)	*hours*	48		
Processing temperature (optimum)		°C	20 - 25		
Processing temperature (minimum)		°C	15		

Technical Data Sheet

Online Shop





coating of a feeding table

Epoxy Resin Systems

EP resin system paving joint mortar ▪ HP-EW60F

The epoxy resin basis system EW60F is an unfilled, medium viscous 2-components combination of resin and hardener with a medium working time. This epoxy resin can be used as a basis for paving joint mortar. It is ideal for medium to large surfaces to be grouted. It is **water emulsifiable** and can also be applied in drizzle. Can be used in the slurry method!

Features and Benefits:

as basis for paving joint mortar (polymeric mortar):

- Fast and permanent grouting
- Clean pavement surfaces, NO weed growth
- Sure-footed, reduced risk of accidents
- Light to heavy traffic load, depending on the mineral composition
- EW60F is water emulsifiable and can be processed in drizzle
- Environmentally friendly when cured
- No cement veil
- Impermeable or open to diffusion
- Sweepers suitable
- self-compacting
- Low odor
- resistant to chemicals

Product Properties:			Resin	Hardener	Method
			EW60F		
Mixing ratio		*weight*	100	100	
Mixed viscosity			medium viscous		
Pot life	(100g at 20°C)	*minutes*	60		
Walkable	(at 20°C)	*hours*	6		
Open to traffic	(at 20°C)	*days*	7		
Processing temperature	(optimum)	*°C*	10 - 25		

Technical Data Sheet

Online Shop

No weeds growing through!

EP resin system paving joint mortar ▪ HP-E40KS

The epoxy resin system HP-E40KS is a 2-component corrosion prevention with pronounced resistance and adhesion properties on metallic substrates.

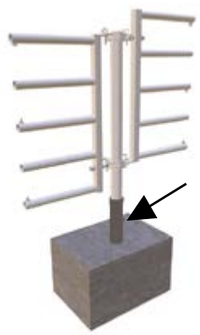
Features and Benefits:

- Very high adhesion properties
- Very good chemical resistance, protection against acids and alkalis
- Protection barrier against wetness and other influences
- For a adhesive-free and scratch-resistant surface
- Solvent-free, can be diluted with our thinner HP-XB if required (max. 2 - 5 %)
- Free from worrying SVHC substances

Product Properties:			Resin	Hardener	Method
			E40KS		
Mixing ratio		*weight*	100	22	
			+10% Thinner HP-XB		
Mixed viscosity			medium viscous		
Pot life	(100g at 20°C)	*minutes*	40		
Walkable	(at 20°C)	*hours*	24		
Final Solid	(at 20°C)	*days*	7		
Processing temperature	(optimum)	*°C*	18 - 25		
Processing temperature	(minimal)		15		
Consumption			0,3 - 0,5		

Technical Data Sheet

Online Shop



MOLD- & CASTING RESINS

SILICONE

SILICONE MOLD MATERIAL

ADDV

MODELLING

ACRYL RESIN

MINERAL POWDER

THICKENING ADDITIVE

PU-CASTING RESIN

CONDENSATION - CURING

KDSV

ADDITION - CURING

MOLDING COMPOUNT

REPRODUCING

RESIN

FAST CASTING RESIN

MOLD

EP-Adhesive-/ Laminate System ▪ HP-E25KL / -45KL

Formenbau

The Epoxy Laminating Resin Systems HP-E25KL and HP-E45KL are unfilled, medium-viscous, chemical resistant combination of resin and hardener with short or medium processing time (pot life).

They can be used as general-purpose systems for many applications:

as Laminating Resin:

- Excellent wet-out of fibreglass, carbon and aramid fibres
- Cold-hardening, medium-viscosity, **HP-E25KL: used from 5°C**

as Mould Resin:

- Usable as mould making resin (mixable with colour pigments)
- For coupling-layers (with fillers)

as Covering Layer Resin:

- Clear, tack-free surface
- Usable for repairs / refit of osmosis damages
- High resistance to many chemicals such as styrene, fuels, ...
- Therefore, they can be used for coatings in tanks, pipelines, ponds and terrariums

as Adhesive Resin or basic for Fillers:

- Due to a good adhesion for bonding / fillers can be added (e. g. combination of HP-PK22 and HP-BF1)

The special formulation allows the usage under difficult conditions (low temperatures, air humidity).

HP-E25KL / HP-E45KL are also free of nonylphenol and contain no reactive diluents!

Please note: HP-E25KL and HP-E45KL come with a similar resin.
Both hardeners can be mixed among themselves.

Product Properties:			Resin	Hardener	
				HP-E25KL	HP-E45KL
Colouring			colourless	light blue-green	
Mixing ratio		*weight*	100	60	
Mixed viscosity	(at 20°C)	*mPa s*	2500 - 3500 (medium viscous)		
Mixed viscosity	(at 25°C)	*mPa s*	1400 - 1800 (medium viscous)		
Pot life	(at 20°C)	*minutes*		**25**	**45**
Demouldable after		*h*		<18	<30
Processing temperature (optimum)		*°C*		15 - 25	20 - 25
Processing temperature (minimum)		*°C*		**5**	**15**

Technical Data Sheet

Online Shop

Epoxy Mould Covering Resin ▪ HP-E25FB

Formenbau

The Epoxy Resin System HP-E25FB is an unfilled, thixotropic 2-component combination of resin and hardener with high sanding anpolishing properties and working time (pot life) about 25 minutes.

Features and Benefits:

- Sandable and polishable
- Spreadable
- Can be coloured with colour pastes
- Creation of fine layers in mould making
- Gelcoat
- Basis for EP foams (use additive HP-BEL11)

Product Properties:		Resin	Hardener
		HP-E25FB	
Colouring		murky	
Mixing ratio	*weight*	100	50
Mixed viscosity (at 20°C)			
Pot life (at 20°C)	*minutes*	25	
Demouldable after	*hours*	24	
Processing temperature (optimum)	*°C*	7	
Processing temperature (minimum)	*°C*	15- 25	

Technical Data Sheet

Online Shop

Mold and Casting Resins

Epoxy Mould Covering Resin · HP-E30FB


Formenbau


Alugefüllt

The epoxy resin system HP-E30FB is an aluminium-filled, high-viscous combination of resin and hardener with high abrasion resistance and processing time (pot life) of about 30 minutes.

Features and Benefits:

- High quality mould covering resin, aluminium-filled
- Non-drip, without run-off on vertical surfaces, high thixotropic
- Produced in vacuum therefore free of air bubbles
- Coloured in deep black
- For abrasion- and breaking resistance surfaces with good thermal conductivity
- User friendly mixing ratios (100:10) (If necessary dilutable with XB-thinner)
- Innovative formulation, free of DETA[1] with high styrene resistance*
- For following layers wet-in-wet. Another option is to work with a dry-coupling layer.

Product Properties:		Resin	Hardener
		HP-E30FB	
Colouring		deep black	
Mixing ratio	*weight*	100	10
Mixed viscosity (at 20°C)			
Pot life (at 20°C)	*minutes*	30	
Demouldable after	*hours*	24	
Processing temperature (optimum)	°C	20 - 25	
Processing temperature (minimum)	°C	15- 25	

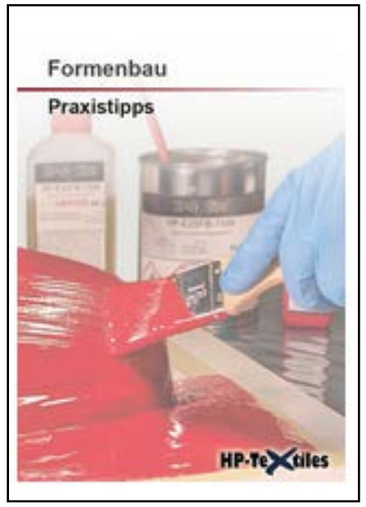
Technical Data Sheet

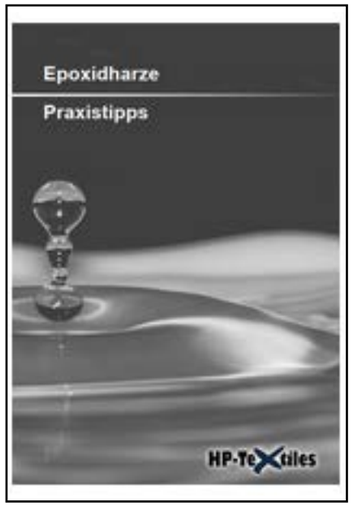
Online Shop

Working instructions for mould making

In our download portal you will find two working instructions on the subject of „mould making“.
Learn the basics for the creation of moulds, from the right choice of material to the construction of the laminate.

You can easily access the working instructions via the following QR code or via our online shop www.hp-textiles.com under the heading „Instructions“.





Mold and Casting Resins

Epoxy Casting Resin System - Transparent - HP-E50GB

Gießen Glasklar

The Epoxy-System HP-E50GB is an unfilled, low-viscosity combination of resin and hardener with working time (pot life) about 40 minutes.*

Usable for epoxy casting of medium thickness (up to approx. 15mm) depending on surface, temperature geometries and casting quantity (volume).*

Features and Benefits:

- transparent, low shrink-casting with tacky-free surfaces
- very good flow behaviour (low-viscosity)
- cold-hardening, demouldable at room-temperature
- high fillable casting resin
- cause pressure-resistant and impact-resistant (tough) moulds / components with high strength and very less shrinkage
- foundry patterns, die plates, reproduction patterns
- building of medium moulds and castings
- encapsulation of decorative elements
- levelling compound / injection resin for structural repairs

HP-E50GB is free of nonylphenol and contains no active diluents!

For a better UV resistance, a suitable clear coat (HP-PUR) should be applied. Furthermore our HP-BEL91 UV-Stabilizer can be add to the epoxy resin or clear coat, in order to give a better protection and improve the UV resistance in a long-term.

During the hardening process, energy can be released in the form of heat, hence a cooling/heat exchanging should be provided in order to prevent hot spots.

Product Properties:			Resin	Hardener	Method
			HP-E50GB		
Colouring			transparent		
Mixing ratio		*weight*	100	50	
Mixed viscosity			low viscous		
Pot life	(100g at 20°C)	*minutes*	approx. 40		
Demouldable after*	(at 20°C)	*hours*	48		
Full cure	(at 20°C)	*days*	7		
Processing temperature (optimum)		°C	10 - 15		

Technical Data Sheet

Online Shop

Mold and Casting Resins

Epoxy Casting Resin System -Transparent- HP-E300GB

Gießen Glasklar

The Epoxy-System HP-E300GB is an unfilled, low-viscous combination of resin and hardener with processing time (pot life) of more than 300 minutes.*

HP-E300GB and HP-E400GB are free of nonylphenol and contains no active diluents!

Features and Benefits:

- Transparent, low shrink-casting with tacky-free surfaces
- Very good flow behaviour (low-viscous)
- Cold-hardening, demouldable at room-temperature, applicable at slightly increased temperatures
- High fillable casting resin
- Causes pressure-resistant and impact-resistant (tough) moulds / components with high strength and very low shrinkage

Industrial Modelling / Hobby Modelling / Boatbuilding:

- ideal for “River Table” making
- creation of transparent, water-clear castings
- foundry patterns, die plates, reproduction patterns, building of medium moulds and castings
- encapsulation of decorative elements

Product Properties:			Resin	Hardener	
				HP-E25KL	HP-E45KL
Mixing ratio		*weight*	100	35	30
Mixed viscosity	(at 20°C)			low viscous	
Pot life	(at 20°C)	*minutes*		> 300 (bei 100g)	> 300 (bei 1kg)
Demouldable after		°C		**< 48**	**< 48**
Processing temperature (optimum)		°C		18 - 35	15 - 20
Possible medium thickness				5	10

HP-E400GB
HP-E400GB has optimised UV protection!

HP-E300GB
For the HP-E300GB, a suitable clear varnish (e.g.: HP-PUR) should be applied for maximum light and UV resistance. Furthermore, the addition of the UV stabiliser HP-BEL91 (in epoxy resin and varnish) massively improves the long-term stability!

Technical Data Sheet HP-E300GB

Technical Data Sheet HP-E400GB

Online Shop

EP-Casting Resin System - Semi-Transparent - HP-E45GA

Gießen Elektroverguss

The Epoxy-System HP-E45GA is an unfilled, medium-viscous combination of resin and hardener with processing time (pot life) of approx. 45 minutes.*

Usable for epoxy casting of medium thickness (up to approx. 20mm*)

HP-E45GA is free of nonylphenol and contains no active diluents!

Features and Benefits:

- Semi-transparent, low shrink-casting with tacky-free surfaces
- Good flow behaviour (medium-viscous)
- Cold-hardening, demouldable at room-temperature
- High fillable casting resin
- The results are pressure-resistant and impact-resistant (tough) moulds / components with high strength

Industrial Modelling / Hobby Modelling / Boatbuilding:

- Foundry patterns, die plates, reproduction patterns
- Building of small moulds and castings with slightly yellow colour
- Encapsulation of decorative elements
- Levelling compound
- Dielectric resin for electrical embedding up to 48 Volts

Product Properties:			Resin	Hardener
			HP-E45GA	
Colouring			transparent	yellowish
Mixing ratio		*weight*	100	60
Mixed viscosity			medium viscous	
Pot life	(100g at 20°C)	*minutes*	45	
Demouldable after*	(at 20°C)	*hours*	< 12	
Demouldable after	(at 30°C)	*hours*	< 6	
Processing temperature (optimum)		*°C*	15 - 25	

** Depends on geometry and total amount of casting.* *Specifications after hardening 7d at 20°C.*

Technical Data Sheet

Online Shop

EP-Casting Resin System - residually flexible - HP-E45GB

Gießen

The epoxy resin system E45GB is an unfilled, low viscous 2-component combination of resin and hardener with a working time of approx. 45 min for casting applications.

Features and Benefits:

- Very good casting properties
- Highly fillable
- Transparent, sticky-free surfaces
- High shock resistance
- Low shrinkage

Industrial Modelling / Hobby Modelling / Boatbuilding:

- Foundry patterns, die plates, reproduction patterns
- Building of small moulds and castings with a transparent or slightly yellow colour
- Encapsulation of decorative elements
- Levelling compound

Product Properties:			Resin	Hardener	Method
			HP-E45GB		
Mixing ratio		*weight*	100	60	
Mixed viscosity			low viscous		
Pot life	(100g at 20°C)	*minutes*	45		
Demouldable after*	(at 20°C)	*hours*	48		
Full cure	(at 20°C)	*days*	7		
Processing temperature (optimum)		*°C*	15 - 25		

Technical Data Sheet

Online Shop

PUR Fast Casting Resin ▪ HP-R4GB /-R12GB


Gießen


Topfzeit: **3min**


Topfzeit: **9min**

The PUR systems HP-R4GB and HP-R12GB are unfilled, low-viscosity 2-component combinations of resin and hardener with rapid through-hardening.

Features and Benefits:

- Excellent flow characteristics
- Fast curing, short demoulding time
- Easy to work with
- High filling capacity
- Creation of detailed models with low wall thicknesses
- Can be dyed with color pastes - Addition max. 3%

Product Properties:			**HP-R4GB**	**HP-R12GB**
Colouring			beige	
Mixing ratio		*weight*	100/100	
Mixed viscosity			low viscous	
Pot life	(at 20°C)	*minutes*	**3 - 4**	**9 - 10**
Demouldable after	(at 20°C)	*minutes*	> 30 *(100g, layer thickness 30mm)*	> 180
Mechanically resistant	(at 20°C)	*hours (h)*	3	24
Electrically resistant	(at 20°C)	*hours (h)*	1	
Hardness Shore D			70	65
Particularities:				
			Ideal for objects < 100g Electric casting compound	Ideal for objects > 100g

HP-R4GB
Technical Data Sheet

HP-R12GB
Technical Data Sheet

Online Shop

Casting Resin System - electronic-casting compound -

The epoxy resin system E45GE is an unfilled, low viscous 2-component combination of resin and hardener with a working time of approx. 45 min. Applicable for casting applications in electronic up to 400 V.

Features and Benefits:

- For introducing electric circuits / connections, Electro applications up to 48 V / in compliance with the VDE regulations up to 400 V
- Excellent casting propertiesTransparent, sticky-free surfaces
- Good light stability
- High impact resistance
- Low exothermy

Technical Data Sheet

Product Properties:			**Resin**	**Hardener**	**Method**
			E45GE		
Colouring			transparent	yellowish	
Mixing ratio		*weight*	100	60	
Mixed viscosity			medium viscous		
Pot life	(100g at 20°C)	*minutes*	45		
Demouldable after*	(at 20°C)	*hours*	48		
Full cure	(at 20°C)	*days*	7		
Processing temperature (optimum)		*°C*	15 - 25		

Acryl Casting Resin ▪ HP-A15GB

The acrylic system HP-A15GB is a medium-viscosity 2-component combination of acrylic resin and mineral powder on a solvent-free water basis.

Features and Benefits:

- Low heat generation
- Easy to process, odorless
- Addition of up to 5% water is possible
- Can be mixed with dry color pigments
- Thickening with cotton flakes is possible
- Creation of decorative and technical elements
- Production of sculptures and reliefs
- Creation of detailed models
- Duplication of objects

Product Properties:			**HP-A15GB**
Colouring			beige
Mixing ratio		*weight*	100 parts Acrylic / 300 parts mineral powder
Mixed viscosity			medium viscous
Pot life	(at 20°C)	*minutes*	**10 - 20**
Demouldable after	(at 20°C)	*minutes*	60 - 120
Mechanically resistant	(at 20°C)	*hours (h)*	8
Full cure	(at 20°C)	*hours (h)*	24
Hardness Shore D			84

Technical Data Sheet

Silicone Mold System ▪ HP-SI6GB / -SI30GB

The silicone systems HP-SI6GB, HP-SI30GB and HP-SI41GB are medium-viscosity 2-component combinations of silicone rubber with a low processing time.

HP-SI30GB

Features and Benefits:

- Medium viscous molding compound
- High tear strength
- Bubble-free grouting
- Creation of flexible molds
- Duplicate in model building

Product Properties:			**HP-SI6GB**	**HP-SI30GB**	**HP-SI41GB**
			addition crosslinking		**condensation crosslinking**
Colouring			light green	red	white
Mixing ratio		*weight*	100/100	100/100	100/3
Mixed viscosity			medium viscous		
Pot life	(at 20°C)	*minutes*	**6**	**30**	**40**
Demouldable after	(at 20°C)	*hours (h)*	3	5	
Hardness Shore A		*hours (h)*	18 - 20	18 - 22	20
Shrinkage		*%*	<0,2	<0,2	<1
Particularities:					
			Application with high dimensional accuracy		Particularly suitable for mineral casting resins Suitable for PU fast casting resins Limited suitable for epoxy casting resins tin free

HP-SI6GB Technical Data Sheet

HP-SI30GB Technical Data Sheet

HP-SI41GB Technical Data Sheet

Thinner for SI6GB / SI30GB ▪ HP-SI-RV

SI-RV is an additiv and thinner for SI6GB, SI30GB or SI41GB. SI-RV can be stired intensively in the mixed silicone-system.

Features and Benefits:

- Excellent dilution effect
- Solvent-free
- Dilution of condensation and additioncuring RTV-2 silicone systems (SI6GB, SI-30GB, SI41GB)
- Optimization of the gradient properties
- Dosage till 10 %

Physical data:
Density 20°C: Ca. 1,0 g/cm³
Viscosity: 50 - 100 mPas
Gardner: < 1

Technical Data Sheet

Online Shop

Polyurethane flexibal Casting Resin ▪ HP-SI-VD

SI-VD is added into the silicone system SI30GB to optimize the flow properties. The addition reduce the pot life of the SI30GB.

Features and Benefits:

- Excellent thickening effect for SI30GB
- Solvent-free
- Dilution of condensation and additioncuring RTV-s silicone systems
- Optimization of the gradient properties
- Creation of silicone putties
- The additon reduce the pot life

Physical data:
Density 20°C: Ca. 1,1 g/cm³
Viscosity: 100 - 300 mPas
Gardner: < 2

Dosage:
Reduction of the flow rate: 0,1 % - 0,2 %
Creation of putties: 0,5 % - 1,0 %

PUR Fast Casting Resin ▪ HP-R15GB-flex

The PUR system HP-R15GB-flex is an unfilled, medium-viscosity 2-component combination of resin and hardener with high flexibility.

Features and Benefits:

- Excellent flow characteristics
- **High flexibility**
- Paintable with colouring pastes
- Creation of detailed models with low wall thicknesses

Product Properties:			**HP-R15GB-flex**
Colouring			beige
Mixing ratio		*weight*	100/30
Mixed viscosity			medium viscous
Pot life	(at 20°C)	*minutes*	**10 - 15**
Demouldable after	(at 20°C)	*minutes*	5
Full cure	(at 20°C)	*hours (h)*	24
Hardness Shore A			60 - 70

Technical Data Sheet

Online Shop

POLYESTER RESIN SYSTEMS

LOW VISCOUS
WAX FREE
POND BUILDING
VORBESCHLEUNIGT
LAMINIERHARZSYSTEM
TOPCOAT
MITTELVISKOS
THIXOTROPIC
UV-STABILITY
LAMINATING RESIN
HIGH UV-STABILITY
WATER STABILITY

GELCOAT
ISO/NPG
MEKP-HARDENER
ORTHOPHTALSÄURE
WAXED
BOAT BUILDING
GROUNDING
TACKY
WEATHER RESISTANCE
UP-RESIN
DECKSCHICHTSYSTEM
TACKY FREE
MILIEU HARZ

Polyester Resin Systems

Polyester resins are inexpensive and therefore widespreaded in the plastic industry.
They are very often used in many different and diversified applications such as marine industry, pond / pool coatings and so on. Polyester resins cure with a MEKP-hardener.

Please consider:
The contained monomer styrene seizes some foams (eg Styrodur®, Styrofoam, ...). This is especially important in the production of sandwich components.
As an alternative we offer our epoxy resin systems!

Table guidance for choosing the right Polyester Resin System.

Properties:

- Excellent value compared to other matrix resins
- Good chemical resistance
- LSE (low Styrene Emission) Polyester Resin
- Simple dosage setting
- The viscosity can be adjusted with the addition of Thixotropic Powder (HP-PK22)








Products	LAMINATING … fibre wet-out	ADHERE … sticking together	COVERING … in female moulds (gelcoat)	COVERING … on top (topcoat)	CASTING … embedding		FEATURES	SURFACE tacky-free surface ?	SURFACE Improved chemical resistance ?	POT LIFE min. at 20°C	TEMPERATURES … processing minimum (recommended) °C	TEMPERATURES … loadability (HDT / °C)
HP-P21L *laminating resin (wax free)*	++	O	-		-		*ORTHO, LSE, slightly thixotropic, laminating resin for frp ponds*	no	no	15-20	**15**	60
HP-P21LP *laminating resin (wax containing)*	++	-	-	+	-		*ORTHO, LSE, slightly thixotropic*	yes	no	15-20	**15**	60
HP-P21LPG *laminating resin (wax containing)*	++	-	-	+	-		*ORTHO, LSE, approval from Lloyd´s Register, slightly thixotropic*	yes	no	15-20	**15**	70
HP-P21LS *laminating resin (wax free)*	++	O	-	-	+		*ISO/NPG, LSE, slightly thixotropic, laminating resin for frp ponds / pools*	no	yes	15-20	**15**	> 90
HP-P21LSP *laminating resin (wax containing)*	++	-	-	+	-		*ISO/NPG, LSE, slightly thixotropic*	yes	yes	15-20	15	> 90

++ = very good applicable + = applicable O = conditionally applicable - = not provided

*** Gel - and Topcoats are available in different colours.**

Rev. 1.7

Law change in the Chemicals Prohibition Ordinance (ChemVerbotsV) !!!

The shipping of polyester resins is only possible if the following basics are met:
- Professional use
- Public research, study or educational institutions
- Resellers

In addition, polyester resin systems can only be picked up by persons over 18 years after having a appropriate instruction.

phone: +49 (0) 5905-9459870 www.hp-textiles.com mail: info@hp-textiles.com

TOPCOAT
POLYURETHAN
IN-MOULD COATING
SIGNAL BLACK
ULTRAMARINBLUE
FLAME RED
RAPE YELLOW
SPRAYING
UV-STABILITY
LUMINIOUS RED

COLOUR / COATING

HP-PUR
WAX FREE
RAPSGELB
SPRITZFERTIG
TRANSPARENT
BRUSH
RAL-COLOURS
COST REDUCTION
TWO COMPONENT COATING
SIGNALWHITE

In-Mould Coating ▪ HP-IMC

The In-Mould Coating (IMC) is a specially developed 2K polyurethane varnish for coating fibre-reinforced plastic components in negative moulds and it is preferably used for coating epoxy laminates.

Whether for highly transparent visible carbon parts, complex vehicle components or special colours in flight model construction - our IMC-Varnish enables the complete manufacturing of the fibre-composite component in the mould. At the end of the process, you will get a painted component.

Our In-Mould Coatings are available in the colour systems of RAL or adjusted to your own colour sample. Highly transparent versions for design fabrics are also available.

Principle:

The painting of the moulded part takes place in the mould or in the negative mould. Instead of grinding and painting the component after de-moulding, the painting already takes place in the mould on the later visible side of the component.
Due to the specially developed formula, the applied PU-Varnish can be easily laminated even after weeks and therefore, even a larger batch production is possible. Especially productions with the Vacuum-Infusion Method or the Vacuum-Press Method can benefit from this principle.
The In-Mould Coating is applied with a spray gun or with a soft brush. Our Epoxy High Load Resin System HP-E29L, HP-E56L or HP-E111L as well as the Injection Resin System HP-E3000GL and HP-E300RI ensure an especially high adhesion between the layers.

Advantages:

1. Significant cost reduction ...
... due to the immense time savings of up to 80% as well as the reduction of additional work steps. Furthermore, compared to conventional gel coats the low layer coating of the IMC reduces not only costs but also the total weight of the component.

2. High adhesion between the layers ...
... due to the special formula of the system. It enables a subsequent further processing after applying the In-Mould Coating even after weeks. In combination with our Epoxy High Load Resin Systems it forms a “real“ chemical bond.

3. Optimised surface quality ...
... available in many RAL colours or in transparent for visible carbon parts. High UV- and light stability as well as a good resistance to weathering.

Features and Benefits:

- High quality coatings for In-Mould coating (first layer in female moulds)
- Userfriendly processing due to the possibility to laminate it again
- Available in different colours (RAL) or Neon Colours
- Good uv-stability, wax free
- Forms chemical compounds with all epoxy-resins (laminating, covering and infusion) from HP-Textiles
- For spraying, manual application with a paint-brush is also possible

Consumtion per Layer	70 - 80	g/m² (wet)
results to approx.	40 - 50	g/m² (dry)

Recommended number of coats 2 - 3 (depends on the coverage of the colour)

1 liter mixture is sufficient for 4 - 5 m² surface in 3 layers with each 75g/m² (wet)

available colours:

RAL1000	C	RAL1024	B	RAL3003	E	RAL4003	C	RAL5013	E	RAL6009	D	RAL6032	D	RAL7022	A	RAL7047	C	RAL9001	C
RAL1001	D	RAL1027	G	RAL3004	E	RAL4004	D	RAL5014	B	RAL6010	D	RAL6033	B	RAL7023	B	RAL8000	A	RAL9002	C
RAL1002	E	RAL1028	G	RAL3005	E	RAL4005	D	RAL5015	D	RAL6011	C	RAL6034	B	RAL7024	B	RAL8001	A	RAL9003	C
RAL1003	G	RAL1032	F	RAL3007	E	RAL4006	C	RAL5017	D	RAL6012	E	RAL6037	F	RAL7026	A	RAL8002	A	RAL9004	A
RAL1004	G	RAL1033	F	RAL3009	B	RAL4007	D	RAL5018	C	RAL6013	B	RAL7000	C	RAL7030	B	RAL8003	F	RAL9005	B
RAL1005	G	RAL1034	F	RAL3011	C	RAL4008	C	RAL5019	C	RAL6014	E	RAL7001	B	RAL7031	C	RAL8004	B	RAL9006	E
RAL1006	G	RAL1037	G	RAL3012	C	RAL4009	B	RAL5020	E	RAL6015	A	RAL7002	A	RAL7032	C	RAL8007	E	RAL9007	B
RAL1007	G	RAL2000	G	RAL3013	F	RAL4010	C	RAL5021	C	RAL6016	C	RAL7003	B	RAL7033	B	RAL8008	D	RAL9010	C
RAL1011	B	RAL2001	G	RAL3014	D	RAL5000	B	RAL5022	E	RAL6017	F	RAL7004	B	RAL7034	B	RAL8011	E	RAL9011	A
RAL1012	F	RAL2002	G	RAL3015	C	RAL5001	B	RAL5023	B	RAL6018	F	RAL7005	B	RAL7035	C	RAL8012	B	RAL9016	C
RAL1013	C	RAL2003	F	RAL3016	F	RAL5002	E	RAL5024	B	RAL6019	C	RAL7006	A	RAL7036	B	RAL8014	D	RAL9017	A
RAL1014	C	RAL2004	G	RAL3017	E	RAL5003	D	RAL6000	B	RAL6020	A	RAL7008	A	RAL7037	B	RAL8015	A	RAL9018	C
RAL1015	C	RAL2008	G	RAL3018	E	RAL5004	C	RAL6001	E	RAL6021	C	RAL7009	A	RAL7038	B	RAL8016	C	RAL9022	B
RAL1016	F	RAL2009	G	RAL3020	G	RAL5005	D	RAL6002	F	RAL6022	D	RAL7010	B	RAL7039	B	RAL8017	A	RAL9023	B
RAL1017	E	RAL2010	G	RAL3022	F	RAL5007	B	RAL6003	A	RAL6024	E	RAL7011	B	RAL7040	C	RAL8019	A		
RAL1018	F	RAL2011	G	RAL3027	D	RAL5008	A	RAL6004	D	RAL6025	F	RAL7012	B	RAL7042	B	RAL8022	B		
RAL1019	B	RAL2012	F	RAL3028	G	RAL5009	C	RAL6005	C	RAL6026	D	RAL7013	A	RAL7043	A	RAL8023	B		
RAL1020	C	RAL3000	F	RAL3031	F	RAL5010	D	RAL6006	A	RAL6027	C	RAL7015	A	RAL7044	B	RAL8024	A		
RAL1021	G	RAL3001	F	RAL4001	D	RAL5011	C	RAL6007	D	RAL6028	D	RAL7016	A	RAL7045	C	RAL8025	A		
RAL1023	G	RAL3002	F	RAL4002	D	RAL5012	C	RAL6008	D	RAL6029	E	RAL7021	A	RAL7046	B	RAL8028	B		

In combination with the MTI®-Hose (membrane-wrapped suction line) the respective advantages are combined and therefore unite the cost reduction with a high level of process stability!

Convince yourself and have a look at our products!!

Follow this QR-Code to a detailed instruction or video of the IMC/MTI®-Method!

Instruction

Video

Clear coat 400 ml glossy ▪ HP-KL500G
Clear coat 400 ml matte ▪ HP-KL500M

NEW

The 1K-Clearcoat Series HP-KL500 are transparent, universally applicable, quick-drying clearcoats for many areas of application. These systems are an ideal protective coating for metal and wood surfaces as well as for paintable plastics. The treated surfaces are protected and refined by the coating, which also gives them a like-new appearance. The clearcoat HP-KL500M is colorless matte or glossy.

Technical Data:

Content: 400 ml
Colour: colorless matte oder glossy

Drying times at 20 °C
Dust dry: after approx. 5 - 10 min
Touch dry: after approx. 25 - 30 min
Fully cured: after approx. 120 min

HP-PUR · HP-PUR-PLUS · HP-PUR-PLUS Textur

HP-PUR-Topcoats are high-quality, solvent-based 2K PUR topcoats for weather-resistant coatings. Ideally suited for coatings in industry, in boat and sports equipment construction as well as pond and pool coatings, and much more.

	PUR	PUR-PLUS	PUR-PLUS Textur
Available colours:	in the specified RAL colours (see table)		
Surface:	shiny	shiny	textured / non-slip
Resistance to: **Weathering** **Permanent water load** **Chemicals**	 good nicht geeignet /	 very good very good very good	 very good very good very good
Abrasion resistance:	mittel	hoch	hoch
UV stability:	good	good	good
Application method:	adjusted ready for spraying or Application with brush or foam roller	Ready for rolling and painting	Ready for rolling and painting
Fields of application:	Coatings for machinery, deck structures, furniture, containers, GRP parts, industrial paintwork and much more.	Coatings in industry, boat and sports equipment construction as well as pond and pool coatings, etc.	Coatings for tank surfaces, bus roofs, boat and ship decks, surfboards, walking areas of industrial floors or in swimming pools, etc.
Mixing ratio: **Resin/hardener (weight)**	100 / 25 if necessary 10 - 20 parts HP-IMC-X	100 / 50	100 / 50 if necessary 10 - 20 parts HP-IMC-X
Pot life at 20°C	approx. 3h	approx. 3 - 5h	approx. 6 - 8h
Application temperature: **optimal** **minimum**	 18 - 25 °C 15 °C up to 70% air humidity	 18 - 25 °C 15 °C up to 70% air humidity	 18 - 25 °C 15 °C up to 70% air humidity
Consumption:	approx. 140 g/m²	approx. 150 - 200 g/	approx. 200 - 250 g/m²
Number rec. Layers:	2 - 3	2 - 3	1
Drying times 20°C: **Dust-free** **Tack-free, can be processed** **Through-drying**	 20 - 30 min 4 - 5 h 48 h	 45 - 60 min 6 - 8 h 48 h	 45 - 60 min 6 - 8 h 48 h
	Important notice: **Do not adhere to PE, PP, PTFE,...** **Not suitable for polyester recoatings.**		

Available colours:

RAL1000	C	RAL1024	B	RAL3003	E	RAL4003	C	RAL5013	E	RAL6009	D	RAL6032	D	RAL7022	A	RAL7047	C	RAL9001	C
RAL1001	D	RAL1027	G	RAL3004	E	RAL4004	D	RAL5014	B	RAL6010	D	RAL6033	B	RAL7023	B	RAL8000	A	RAL9002	C
RAL1002	E	RAL1028	G	RAL3005	E	RAL4005	D	RAL5015	D	RAL6011	C	RAL6034	B	RAL7024	B	RAL8001	A	RAL9003	C
RAL1003	G	RAL1032	F	RAL3007	E	RAL4006	C	RAL5017	D	RAL6012	E	RAL6037	F	RAL7026	A	RAL8002	A	RAL9004	A
RAL1004	G	RAL1033	F	RAL3009	B	RAL4007	D	RAL5018	C	RAL6013	B	RAL7000	C	RAL7030	B	RAL8003	F	RAL9005	B
RAL1005	G	RAL1034	F	RAL3011	C	RAL4008	C	RAL5019	C	RAL6014	E	RAL7001	B	RAL7031	C	RAL8004	B	RAL9006	E
RAL1006	G	RAL1037	G	RAL3012	C	RAL4009	B	RAL5020	E	RAL6015	A	RAL7002	A	RAL7032	C	RAL8007	E	RAL9007	B
RAL1007	G	RAL2000	G	RAL3013	F	RAL4010	C	RAL5021	C	RAL6016	C	RAL7003	B	RAL7033	B	RAL8008	D	RAL9010	C
RAL1011	B	RAL2001	G	RAL3014	D	RAL5000	B	RAL5022	E	RAL6017	F	RAL7004	B	RAL7034	B	RAL8011	E	RAL9011	A
RAL1012	F	RAL2002	G	RAL3015	C	RAL5001	B	RAL5023	B	RAL6018	F	RAL7005	B	RAL7035	C	RAL8012	B	RAL9016	C
RAL1013	C	RAL2003	F	RAL3016	F	RAL5002	E	RAL5024	B	RAL6019	C	RAL7006	A	RAL7036	B	RAL8014	D	RAL9017	A
RAL1014	C	RAL2004	G	RAL3017	E	RAL5003	D	RAL6000	B	RAL6020	A	RAL7008	A	RAL7037	B	RAL8015	A	RAL9018	C
RAL1015	C	RAL2008	G	RAL3018	E	RAL5004	C	RAL6001	E	RAL6021	C	RAL7009	A	RAL7038	B	RAL8016	C	RAL9022	B
RAL1016	F	RAL2009	G	RAL3020	G	RAL5005	D	RAL6002	F	RAL6022	D	RAL7010	B	RAL7039	B	RAL8017	A	RAL9023	B
RAL1017	E	RAL2010	G	RAL3022	F	RAL5007	B	RAL6003	A	RAL6024	E	RAL7011	B	RAL7040	C	RAL8019	A		
RAL1018	F	RAL2011	G	RAL3027	D	RAL5008	A	RAL6004	D	RAL6025	F	RAL7012	B	RAL7042	B	RAL8022	B		
RAL1019	B	RAL2012	F	RAL3028	G	RAL5009	C	RAL6005	C	RAL6026	D	RAL7013	A	RAL7043	A	RAL8023	B		
RAL1020	C	RAL3000	F	RAL3031	F	RAL5010	D	RAL6006	A	RAL6027	C	RAL7015	A	RAL7044	B	RAL8024	A		
RAL1021	G	RAL3001	F	RAL4001	D	RAL5011	C	RAL6007	D	RAL6028	D	RAL7016	A	RAL7045	C	RAL8025	A		
RAL1023	G	RAL3002	F	RAL4002	D	RAL5012	C	RAL6008	D	RAL6029	E	RAL7021	A	RAL7046	B	RAL8028	B		

PUR
Technical Data Sheet

PUR-PLUS
Technical Data Sheet

PUR-PLUS-TEXTUR
Technical Data Sheet

HP-PURMA 2K PUR Topcoat MATT

NEW

HP-PURMA is a high-quality two-component varnish for high quality any weatherproof coatings.
Ideally suited for coatings of machinery, deck superstructures, furniture, containers, GRP parts, industrial coatings and much more

Easy to apply · Brillant colours · High resistance

Properties and fields of application:

- **Matt** finish
- Available in almost all RAL colors
- Top coat for outdoor weathering without permanent exposure to water
- Long-lasting color stability due to good UV protection
- Professional 2-component polyurethane finish, also for industrial coatings
- Suitable for coating machinery, deck superstructures, furniture, containers, GRP parts and much more
- Ready to spray, application with a soft brush or suitable roller also possible

Colour Pastes ▪ HP-FP

The opaque color pastes of the HP-FP series are made of high-quality pigments, castor oil and selected surfactants. The color pastes are free from solvents and volatile organic compounds.

Features and Benefits:

- Suitable for coloring solvent-free epoxy and polyurethane systems
- Due to high pigment concentration very efficient in consumption
- Contains surfactants and dispersants, therefore compatible with many basic materials
- Based on exclusively colourfast pigments
- Great color fidelity and reproducibility
- Available in many RAL colours or on customer request

Mixing ratio (prescription):

Coatings: 10 - 15% (weight parts)
Cover layer systems: 5 - 10% (weight parts)
Casting & Laminating Systems: 1 - 5% (parts by weight)

RAL1015	B	RAL3015	B	RAL5012	B	RAL6037	D	RAL8001	B
RAL1016	E	RAL3017	D	RAL5015	B	RAL7012	B	RAL8017	B
RAL1018	C	RAL4008	F	RAL6018	F	RAL7016	B	RAL9001	B
RAL2004	F	RAL4010	E	RAL6026	C	RAL7030	B	RAL9003	A
RAL3001	E	RAL5002	D	RAL6029	D	RAL7035	B	RAL9005	A

** To increase the color stability, we recommend using an additional transparent topcoat HP-E30TDS-0000 incl. approx. 3% UV stabilizer HP-BEL91. These products can be ordered optionally. **

Colour Pastes, opaque ▪ BM-FPN

The opaque pigment pastes consist of high quality pigments, oil and certain tensides. The pigment pastes are free of solvents and volatile organic compounds. The pigment pastes are used for colouring of coatings.

Standard colours:

red brown	-BR	black	-S
blue	-BL	white	-W
yellow	-GE	red	-R
green	-GR		

purplish violet	-SV	telemagenta	-TM
burgundy violet	-BV	turquoise blue	-TB
traffic purple	-VP	turquoise gree	-TG
rose	-RE		

Characteristics and application:

- Suitable for colouring solvent free epoxy resin and polyurethane systems
- Due to its high pigment concentration very economical in consumption
- good colour fidelity and reproducibility
- Good colouring

Colour Pastes, Set of 7 x 20 g Pigment paste (liquid)

Article: BM-FPN-SET-01
Colour Pigments - Set of 7 x 20 g -

red brown		black	
blue		white	
yellow		red	
green			

Article: BM-FPN-Set-02
Colour Pigments - Set of 7 x 20 g -

purplish violet		telemagenta	
burgundy violet		turquoise blue	
traffic purple		turquoise gree	
rose			

Colour Pastes, metallic ▪ HP-FMP

These extraordinary metallic color pastes of the HP-FMP series are made from high quality pigments, castor oil and selected tensides. The color pastes are free from solvents and volatile organic compounds.

Standard colours:

Pearl White	FMP-PW	Tangerine Orange	FMP-TO	Bubble Pink	FMP-BP
Silver Black	FMP-SB	Yellow Gold	FMP-YG	Bright Blue	FMP-BB
Chocolate Brown	FMP-CB	Wine Red	FMP-WR	Spring Green	FMP-SG
Bronze	FMP-B	Light Plum	FMP-LP		

Characteristics and application:

- For coloring solvent-free epoxy and polyurethane systems
- Ideal for casting applications such as River tables, jewelry making and much more
- Very efficient in consumption thanks to the high pigment concentration
- Contains surfactants and dispersants, therefore compatible with many base materials
- Based on exclusively color-fast pigments
- Great color fidelity and reproducibility

Mixing ratio fir casting applications: 1-3 % (weight ratio)

We recommend the following resin systems for our Metallic Colour Pastes:
HP-E25DM; HP-E25D; HP-E50GB; HP-E300GB

BEL31: To achieve the color effect, BEL31 can be stirred into the resin system. The additive is stirred into the finished system for thixotropy and thus significancy improves the expiration and setting properties.

Colour Pigments ▪ HP-FD

The opaque colour pigments of the HP-FD series are used for colouring layers (gel and topcoats). They are suitable for laminating and casting resins.

Colour	Art.-No.	Bulk Density g/ml	Riddle Densitiy g/ml	Chemical Specification	Approximate Values referring to total quantity in laminating resins %	in covering resins %
titanium white	-TW	0,8	1,0	inorganic	10 - 15	15 - 20
pure yellow	-EG	1,2	1,5	inorganic	10 - 15	15 - 20
univ. pure red	-ER	1,5	1,9	inorganic	5 - 10	10 - 15
terra di Sienna[1]	-TS	0,9	1,1	inorganic	5 - 10	10 - 15
moss green	-MG	0,9	1,1	inorganic	5 - 10	10 - 15
crystal blue	-KB	1,1	1,3	inorganic	5 - 10	10 - 15
ultramarine blue	-UB	0,5	0,7	inorganic	5 - 10	10 - 15
black	-RS	0,8	1,0	inorganic	5 - 10	10 - 15

[1]With unsaturated polyester resins, pigment terra di sienna may stop the reaction! That is why we advice against using this combination

Fluorescent pigments -Neon- ▪ BM-FL

The opaque colour pigments are used for colouring of top layers (gel or top coats). They are also applicable for laminate and casting resins.

Standard colours:

orange	-BR	red	-S
yellow	-BL	green	-W

Characteristics and application:

- Applicable as colour pigments in top coat systems (gel- and topcoats) or for colouring of laminate and casting systems.
- Dosage up to 20%
- Medium light stability (wool scale 4/8)
- Bright colouring (neon)
- Suitable for epoxy resins and PU-coatings

Note:
We recommend prior trials. Due to the rather low light stability of fluorescent pigments, we recommend high layer thicknesses and a protective coating (clear coat). Fluorescent pigments afterglow in the dark.

Glow in the dark powder ▪ HP-GLOW

Our high qualitiy glow in the dark powder of the HP-GLOW series, are able to absorb sun or any artificial light and emit a bright light for long period of time.

green

turquoise blue

Characteristics and application:

- Glow time: up to 10 hours, depending on the amount of light stored or light intensity
- Ideal for casting applications such as for example River tables, jewelry floor markings, emergen cy exits, varnishes, furniture, stair edges, etc.
- Compatible with many basic materials
- Charging by: UV-radiation, daylight, artificial light and many more
- 30g / 75g in the PET mini jar

Mixing ratio for casting applications: 1,5 - 2% (weight)

The pigments tend to settle in the resin & hardening mixture.
To minimize deposition, we recommend the use of BEL31. The additive is stirred into the finished system for thixotropy and thus significancy improves the flow and removal properties.

Transparent colourant (liquid) ▪ BM-FTP

High concentrated, transparent colouring, easy doseable liquid with useful dropping cap.

Standard colours:

brown	-BR	red	-S
blue	-BL	pink	-W
turquoise-bright	-GE	red-purple	-R
sunny-yellow	-GR	black	-SW
green	-G		

Characteristics and application:

- Due to high colourant concentration very economical in consumption
- Good colouring
- Suitable for transparent resin systems
- Added quantity depends on desired colour intensity

Transparent colourant (liquid), Set of 7 x 20 ml

Article: BM-FTP-SET
Transparent colourant - Set of 7 x 20 ml-

brown		red	
blue		pink	
turquoise-bright		red-purple	
sunny-yellow			

Glitter Set

Glitter decoration sprinkle in useful sprinkle tubes for creative design in casting objects.

Article: BM-GL-5
Neon-Glitter - Set of 5 x 3 g -

Article: BM-GL-6
Glitter - Set of 6 x 3 g -

Rainbow decoration glitter ▪ HP-Glitter

Our high quality decoration HP-GLITTER provides a unique glitter rainbow-effect and is ideal to create real eye-catchers e.g. jewelry, decoration, ...

Characteristics and application:

- Suitable for dyeing solvent-free epoxy
- Ideal for casting applications such as River-Tables, jewelry production and much more
- Very efficient in consumption
- High color fidelity and reproducibility
- 10 g in a PET mini bottle

SILICONE FREE

LIQUID

CARNAUBA-WAX

PRIMER

PRIMING WAX

WAX DISPERSION

RELEASE FILM

MOULD RELEASE AGENTS

HIGH GLOSS RELEASE AGENT

VISCOUS

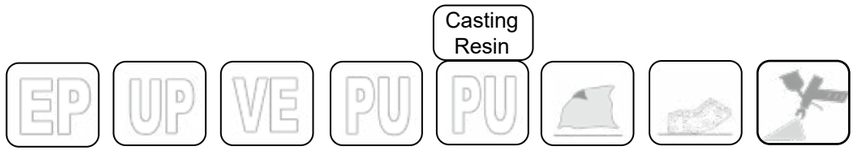
PASTY

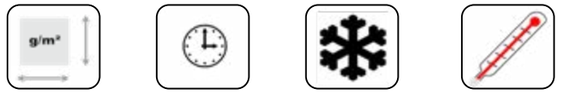
POLISHABLE

Mould Release Agents

Mould release agents are very important tools for the composite industry. They are used to facilitate the removal of cast parts from the moulds. Therefore, a post-treatment of the component is not necessary and it is possible to reuse the mould. Release agents often have a significant effect on the surface of the finished product and costs can be minimized by using the right release agent.
Please consult the following diagram as a support to choose the right Mould Release Agent System.

All release agents are free of Silicone and PTFE!





Products	SUITABLE FOR					APPLICATION WITH				FEATURES	POLISHABILITY	CONSUMPTION	DRYING TIME	TEMPERATURES	
	… fibre wet-out	… sticking together	… in female moulds (gelcoat)	… on top (topcoat)	… casting resin	… embed-ding	...fine-pored sponge	...spray gun				g/m²	minutes at 20°C	...APPLICATION min. (recommended) °C	… max. loadability °C
HP-BM17 * Wax Dispersion, liquid	+	+	+	-	+	++	+	++		Applicable on smooth, non-porous surfaces. Usable as primer for PVA. Residues can be cleaned with white spirit or thinner XB.	+	**30**	15	**15**	80
HP-G * Priming Wax, viscous					-	+	-	-		NO single release agent ! Primer for PVA. Residues can be cleaned with white spirit or thinner XB.	O	**30**	5 - 15	**15**	100
HP-PVA * Release Film, liquid	++	++	++	++	-	+	++	++		Generates very safe release film. Priming with HP-G (or HP-BM17 or HP-CX7) is necessary. Residues can be cleaned with water.	-	**60**	5 - 10	**15**	100
HP-CX7 * Carnauba-Wax, pasty	++	++	++	+	+	++	-	-		Polish in several layers. High-gloss release agent. Usable as primer for PVA. Residues can be cleaned with white spirit or thinner XB.	++	**15 - 20**	10 - 15	**20**	80
HP-HGR5 * High-Gloss Relase Agent	++	++	++	++	-	+	++	++		Water based – 100% free of solvents! Very good release effect with PUR (IMC). Residues can be cleaned with water.	++	20 - 25	5 - 15	15	150
HP-HGR80 * High-Gloss Relase Agent	++	++	++	++	-	+	++	++		Water based – 100% free of solvents! Very good release effect with PUR (IMC). Residues can be cleaned with water.	++	20 - 25	10 - 15	15	80
BM-SS02 Silicone Spray	++	-	-	-	++	++	-	++		Release agent for GfK and silicone moulds Care agent for cured silicone moulds	-	10	/	15	150

++ = very good applicable + = applicable o = conditionally applicable - = not provided

C = in combination with + or ++

Rev. 3.6

* free of Silicone and PTFE

Mould Release Agents

Cleanser / Thinner

Article: HP-IMC-X
Thinner for PU

HP-IMC-X is a thinner on the basis of xylene for our In-Mould-Coatings and our 2K PUR Topcoats and other polyurethane coatings.

Description and Application:

The thinner is used to achieve the ideal consistency in the blended PU given system.

Dosage max. 5% (by weight)

Article: HP-XB
XB-Thinner

Degreasing agent for cleaning applications / passive thinning agent for EP-Systems

Description and Application:

- Spraythinner for coating systems
- Thinner for EP-undercoat
- Mould cleaner
- Degreasing agent for cleaning applications
- Paint brush- and equipment cleaner

Article: BM-RV23
Reactive diluent for epoxy resins

Low viscous, difunctional additive for epoxy resin systems

Description and Application:

- Excellent thinning of epoxy resins
- Difunctional
- Solvent free
- Less brittleness

Article: HP-AC
Acetone

Boiling Point: 56°C
Melting Point: -95°C

Description and Application:

Acetone is an uncoloured, aromatic smelling fluid. It is completely mixable with water. The substance is very volatile.

Aceton is used as a solvent in colours, varnish and as a chemical intermediate. Aceton is able to claen Paint-brushes, laminate rollers, ventilation rollers and other tools from non-cured polyester and epoxy resin.

Article: BM-HWP-250
Handwash paste, 250 ml

Handwash paste for hands and skin

Description and Application:

- Dermatologically tested
- pleasant, fruity odour
- Very economical due to its ingredients
- high dissolving power to oils, coatings and resins

UV-STABILITY
COTTON FLOCKS
THIXOTROPYPOWDER
LIGHT STABILIZER
THIXOTROPINGAGENT
DEGASSING ADDITIVE
MICROBALLOONS
BLACK
LEVELLINGADDITIVE
CHOPPEDGLASSFIBRE

FILLERS / ADDITIVES

FIBRE MASS
CRYSTAL BLUE
COLOUR PIGMENTS
FILLING COMPOUND
GLASSFIBRE
TITANIUM WHITE
FLOAMINGAGENT
COTTON FLOCKS
DEGASSER
THICKENINGAGENT
ANTI-YELLOWADDITIVE

Fillers

Please consult the following diagram as a support to choose the right fillers.

Products	FIELDS OF APPLICATION							DOSAGE	BULK WEIGHT	FEATURES /BENEFITS
	… thicken / thixotroping	… anti setting	…backfilling	…coupling layer	… bonding, adhesion		…rough putty	… fine- / light-weight putty	By weight (approx.) %	approx. g/l	
HP-PK22 **Thixotroping Agent, pyrogenic silica**	++	++	C	C	C		C	C	0,5 - 5	40	Hydrophobic = does not absorb water. Density: 2,2g/cm³; BET-surface: 200m²/g Dosage depends on the viscosity and temperature.
HP-MB2 **Microballoons**	-	-	++	-	-		C	++	till 30	140 - 150	Spezific weight 0,26g/cm³ max. particle size: 200µm Melting point: > 1200°C Particle size distribution (d50): 50µm
HP-BF1 **Cotton Flocks**	C	-	++	++	++		++	C	till 30	70 - 90	Fibre length: 200 - 400µm Fibre thickness: 10 - 20 µm
HP-GS3, HP-GS6 **Chopped Glass Fibre**	-	-	++	++	++		++	-	till 10	350 - 400	Fibre length: 3 and 6mm Fibre thickness: 10 - 20 µm
BM-AL **Aluminium Powder**	+	-	++	-	-		-	-	till 50	1400	Density: approx. 2,7g/ml Bulk weight:approx. 1400g/l Particle Size: < 100µm Purity: > 99%
BM-QS **Quartz Sand**	+	-	++	-	-		-	-	as required	1500	Density: approx. 2,7g/ml Bulk weight: approx. 1500g/l Particle Size: 0 - 1 mm / 1 - 2 mm

++ = very good applicable + = applicable o = conditionally applicable - = not provided

C = in combination with + or ++

Rev. 3.5

HP-PK22

HP-MB2

HP-BF1

HP-GS6

Fillers / Additives

phone: +49 (0) 5905-9459870 www.hp-textiles.com mail: info@hp-textiles.com

Additives

Liquid additives to adjust properties of resins and paints.

HP-BEL11: Liquid foaming agent

- For foaming epoxy resins and to build foam laminates or in combination with sandwich materials (such as paddles or other components).

- The foaming agent must be stirred thoroughly. Higher speed cause to a finer dispersion, what leads to a evenly distributed foam-structure.
  An additional thixotropig with (approx. 5 % by weight) HP-PK22, cause to a better foam up and a more homogeneous foam structure.

Guide formulation for an epoxy-foaming resin, based on HP-E40D:

		quantities (g)
HP-E40D (resin)	:	100 g
HP-E40D (hardener)	:	50 g
HP-PK22 (thixo-agent)	:	7,5 g
corresponds to 5% by weight		
HP-BEL11 (foaming agent)	:	4,5 g
corresponds to 3% by weight		

Hint:
It is able to come to demixing of HP-BEL11, because the product will not be dissolved.
We recommend tests beforehand, because there are several influencing factors for the foam build up.

HP-BEL31: Liquid thixotroping agent

- Prevents settling / sagging of resin formulations.
  Main usage in covering systems (paints, topcoats,…).
  For high thixotroping applications like pitties, we recommend HP-PK22.

- After approx. 1-2h, it will generate a thixotropy. Because of this reaction time, we recommend predispen sing into resin component. After mixing with resin, the viscosity will build up slowly.

HP-BEL51: Degassing additive

- Used to add, in order to support the vent and degassing of gelcoats

- It is possible to add this product to the mixed product (resin with hardener).
  To prevent air bubbles, we recommend to add it to the resin component, before adding to the hardener.

HP-BEL71: Levelling additive

- Improve levelling properties (such as gel- or topcoats), reduces “fish-eyes” and other surface effects.
  Primarily used in covering systems, like topcoats.

- It should admit to the mixed product (resin with hardener).

HP-BEL91: Light Stabilizer / Anti-Yellowing Additive

- Low-viscosity, UV-absorber for high quality surface-applications, (carbon-design, wooden coatings, casting).
  Usable in epoxy-systems and PUR-paints from HP-Textiles.

- It should admit to the mixed product (resin with hardener).

without HP-BEL91 with HP-BEL91

ARTICLE		HP-BEL11	HP-BEL51	HP-BEL71	HP-BEl91	
Suitable for		EP	EP, UP	EP,UP,PUR	EP, UP, PUR	EP, UP, PUR
Dosage (based on total formulation)	*weight %*	0,5 - 4[1]	0,2 - 2[1]	0,2 - 0,8[1]	0,5 - 1,5[1]	0,2 - 4[1]
Add-on						
resin		no	recomm.[2]	recomm.	possible	possible
mixture		recomm.	no	possible	recomm.	recomm.
Density (at 20°C)	*g/cm³*	0,98 - 1,02	1,14 - 1,18	0,79 - 0,83	0,93 - 0,97	0,94 - 0,98
Active ingredient based on		active foaming agent	carbonyl diamides	polysiloxanes	polyacrylic acids	amines
Opaque?		not specified	Overdosing may cause to less transparency.			no opacity

*Please note:
[1]The mentioned amounts are standard values. Additives or combination among themselves may cause a less transparent resin. The exact values should be determined by tests beforehand.

[2]The thixotropy will generate after a medium reaction time. That is why we recommend predispensing into resin component.

NITRIL GLOVES
BRUSH SET
STIRRER
TELESCOPE EXTENSION

TOOLS/ACCESSORIES

BRUSH
VELOUR ROLLER
PLUG BRACKERT
SPIRALBRISTLEROLLER
POLYAMIDROLLER
POLYESTER PAINT ROLLER
BRUSH SET
MIXING CUP
FOAM ROLLER
DEGASSER ROLLERS
PLASTIC VALVE
SCISSOR
PLASTIC TRAY

Degasser Roller

Degasser rollers are used for compressing and ventin the laminates.
The aluminium rollers have a high resistance to almost all cleanser. They can be cleaned by burning off cured resin and so the lifetime will be even longer. Also they have an ergonomical formed plastic grip with adapter for an extension (HP-L1024).

Article	ROLLER Ø	ROLLER WIDTH	SUITABLE FOR
Paddle Roller			
HP-PR-20x75	20mm	75mm	almost all resin systems and glass fabrics
HP-PR-25x75	25mm	75mm	
HP-PR-25x150	25mm	150mm	
HP-PR-30x100	30mm	100mm	
Radius Roller			
HP-RR-13x75	13mm	75mm	almost all resin systems and glass fabrics
HP-RR-25x75	25mm	75mm	
HP-RR-25x150	25mm	150mm	
HP-RR-50x75	50mm	75mm	
HP-RR-50x150	50mm	150mm	
Spiral Bristle Roller			
HP-SBR-30x50	30mm	50mm	uneven surfaces and thin glass fabrics
HP-SBR-30x75	30mm	75mm	
HP-SBR-30x100	30mm	100mm	
HP-SBR-30x150	30mm	130mm	
Nobby Roller			
HP-NR-25x75	25mm	75mm	thick matts and fabrics
HP-NR-25x100	25mm	100mm	
HP-NR-25x150	25mm	150mm	
HP-NR-25x200	25mm	200mm	
Radius Roller			
HP-DR-13x50	13mm	50mm	curved and round surfaces
HP-DR-25x75	25mm	75mm	
Corner Roller			
HP-CR-50x15	50mm	15mm	rough and edges
Plastic Nobby Roller			
HP-L1021	68mm	24cm	coatings of greater areas

Tools / Accessories

Article	DESCRIPTION
HP-L51 / -L301 / -L601	Plastic Tray 50ml
HP-L300	Plastic Tray 300ml + 1 Stick-in handle 27cm
HP-L1001	10 pcs. Paint and Varnish Set
HP-L1002	6 pcs. Brush Set with Pot
HP-L1003	10 pcs. Brush Set
HP-L1010	Foam Roller 5cm
HP-L1011	Foam Roller 10cm
HP-L1015	Velours Roller 10cm
HP-L1067 / HP-L1066	Velours Roller 5cm / 15cm
HP-L1016	Polyamide Roller 10cm
HP-L1017	Polyamide Roller 15cm
HP-L1022	Polyamide Replacement Roller 25cm
HP-L1026	Polyamide Roller 25cm
HP-L1032	Paint Roller 25cm, Flor height: 4mm
HP-L1034	Paint Roller 10cm, Flor height: 4mm
HP-L1023	Paint roller handle 8mm
HP-L1030	Paint roller handle 6mm
HP-L1101	Flat brush light bristle 25mm
HP-L1102	Flat brush natural bristle 25mm
HP-L1104	Universal brush 14mm
HP-L1105	Universal brush 18mm
HP-L1107	Laminating Brush 15mm
HP-L1110	Flat brush natural bristle 35mm
HP-L1071	Laminating Brush 2cm
HP-L1103	Spatula Set, 4 pcs. , plastic
HP-L1120	Stirrer, 20cm, plastic
HP-L1128	Stirrer, 28cm, plastic
HP-L1051 / HP-L1052	Stirrer with Metal Propeller for 15kg / for 25kg
HP-L1061	Spatula / 1 pack = 100 piec.
HP-L1054 / HP-L1055	Scissors, Stainless Steel
HP-L1042 / -44, -46, 48	Plastic Bucket 1,2ltr., 2,6ltr., 5,7ltr., 10,8ltr.
HP-L1064	Mixing Cup 500ml
HP-L1050	Plastic Bucket 14 ltr. with measure
HP-L1036 / -1037	Plastic Bucket 8 ltr. / 12 ltr.
BM-1395	Graduated Measuring
HP-L4001 / HP-L4002	Adapter / Mixing Tube for 29g double syringe
HP-L1057 / -58, -59	Plastic Valve's
HP-L7005/ -15, -25, -35	Plastic Bottle 100 ml, 250ml, 500ml, 1000ml
HP-L7040 / -50, -60,- 70, -80	Jerrycan 2,5 ltr., 5., 10ltr., 20ltr., 30ltr.
HP-VZ3006	Digital Table Scale, until 5kg, Readability: 1g
HP-VZ3010	Digital Table Scale, until 10kg, Readability: 1g
HP-SS	Sanding Spnge, Grit: 60, Grit: 100, Grit: 180, Size: 98 x 66 x 25mm

Ordering Information

OFFER:

All offers are subject to confirmation and without obligation. All deliveries are based on our general terms and conditions. Miscalculate, clerical error, print mistakes and errors respectively authorise us to correct it, even in case the bill is already drafted.

PRICE:

Our prices depend on the latest valid price list. All prices quoted in our catalogue are net wholesale prices and subject to VAT of 19%. The prices are not including packaging & shipping.

TERMS OF PAYMENT:

Payment in advance (bank transfer) with 2% discount:
After placing your order you will receive an e-mail, containing your customer number, proforma-invoice, order number and the total amount of your order also including our bank details. Please indicate this information on the payment when paying via bank transfer.

Account holder: HP-Textiles GmbH
Account number: 624 1122 800
Sort code: 280 200 50 (Oldenburgische Landesbank AG)

For bank transfers from foreign countries:
S.W.I.F.T.-Code: OLBO DE H2
IBAN DE23280200506241122800

The goods are dispachted within 24hours after receiving the payment.

Direct Debit (Only available for German account holders): PayPal

Paying my order by Direct Debit: After placing your order you will receive a form, which you will need to fill out and send to us bythe post office. In this form you will be asked to state your details such as invoice address, delivery address, date of birth and bank details (IBAN and BIC).
After receiving the form back, we will proof your status and inform you immediately about the status of your order.
The goods are dispachted within 24hours after receiving the direct debit form.

Via PayPal:

PayPal is designed to be a safer way to send money online. PayPal does not expose or sell customers financial information to merchants. Product features include information is automatically sent with a high level of data encryption, to help safeguard against identity theft, every PayPal payment is followed by an email confirming transaction and online safety essentials that contains the identity protection guide to help for avoid identity theft. After your online order you´ll receive an additional e-mail confirming your order incl. customer-number, proforma-invoice-number and total amount. Please indicate this information on the Paypal payment.

Ordering Information

Ordering Information

DELIVERY WITHIN GERMANY:

Dispatch Methods:

The prices are calculated for standard parcel inclusive insurance (excluding hazardous goods or bulky goods fees) please see bellow the current prices.

up to	2 Kg	5,90€	up to 50kg	19,90€	
up to	10 Kg	7,90€	up to 75kg	29,90€	
up to	25 Kg	10,90€	up to 100kg	39,90€	(the price includes 19%VAT)

Different shipping costs:

Dangerous goods:
Some resin and hardener products must be shipped as dangerous goods.
Therefore we have to calculate the following shipping costs for these container units:
from 27kg containers: 34.50 €
from 42 kg containers: 45.90 €

Bulky goods:
Even if the weight is low, some goods sold by the meter on a cardboard tube are declared as bulky goods.
One-off bulky goods surcharge: 10.90€
The actual shipping costs are always shown separately in the order.

Island Delivery:
Delivery to islands has normally a fee of 14,50€ per courier service. Hazardous goods will only be delivered by freight carrier.

Delivery per Forward Agency:
Certain hazardous goods or very heavy rolls can only be dispatched by freight carrier. You can contact us per e-mail or even calling and requesting the shipping cost to your city or country. Otherwise, you will receive an e-mail with a confirmation concerning the shipping charges.
The freight by truck depends on the weight and distance. The actual freight charges will always be charged.

DELIVERY TIME:

Please allow two working days for goods which are delivered within Germany and up to 6 working days for the delivery to foreign countries. The goods are dispachted within 24hours after receiving the payment.

Order today, delivery tomorrow:
With Guaranteed 24 Service it is possible to receive your goods the next day. The goods will leave our warehouse only after payment. Please note that the order must be made until 12 o‘clock and an 8,95€ extra charge for this service.
*Apllies from Mondays till Thursdays.

You can schedule your delivery for 8:00, 9:00, 10:00 or 12:00 o‘clock on the next day.
* Please note that this service does not cover the whole of Germany, please inform us about your postal code (zip code) so we can check if the service is available where you live.
* Please contact us for the exact total price for this service.

WORLD WIDE DELIVERY:

In case your country is not listed on the shipping list, please contact us regarding the shipping prices to your country.

Tel: 0049 (0)5905 945 98 70 e-mail: info@hp-textiles.com

Ordering Information

DELIVERY WITHIN EUROPE:

Delivery outside Germany are normally per courier service. Outside the European Union customs clearence costs or customs duties may occur, that will be charged from your account.

SHIPPING PRICES FOR EUROPEAN-WIDE-DISPATCH BY PARCEL SERVICE (MAINLAND ONLY):

COUNTRY	up to 5 kg	up to 15 kg	up to 30 kg	up to 45 kg	up to 60 kg	up to 90 kg
Belgium*	17,05 €	18,68 €	22,30 €	40,98 €	44,60 €	66,90 €
Bulgaria	upon request					
Denmark*	21,79 €	24,47 €	30,73 €	55,20 €	61,46 €	92,19 €
Great Britain**	upon request					
Estonia*	35,14 €	39,52 €	57,24 €	96,76 €	114,48 €	171,72 €
Finland	33,07 €	36,14 €	53,45 €	89,59 €	106,90 €	160,35 €
France*	21,79 €	24,47 €	30,73 €	55,20 €	61,46 €	92,19 €
Greece*	upon request					
Irland	28,07 €	31,85 €	40,63 €	72,48 €	81,26 €	121,89 €
Italy*	33,07 €	36,14 €	53,45 €	89,59 €	106,90 €	160,35 €
Croatia	35,14 €	39,52 €	57,24 €	96,76 €	114,48 €	171,72 €
Latvia*	35,14 €	39,52 €	57,24 €	96,76 €	114,48 €	171,72 €
Lithuania*	35,14 €	39,52 €	57,24 €	96,76 €	114,48 €	171,72 €
Luxembourg*	17,05 €	18,68 €	22,30 €	40,98 €	44,60 €	66,90 €
Netherlands*	17,05 €	18,68 €	22,30 €	40,98 €	44,60 €	66,90 €
Norway**	55,81 €	60,49 €	71,06 €	131,55 €	142,12 €	213,18€
Austria*	17,05 €	18,68 €	22,30 €	40,98 €	44,60 €	66,90 €
Poland*	24,79 €	27,98 €	35,42 €	63,40 €	70,84 €	106,26 €
Portugal*	28,07 €	31,85 €	40,63 €	72,48 €	81,26 €	121,89 €
Romania*	38,72 €	47,04 €	73,15 €	120,19 €	146,30 €	219,45 €
Sweden	33,07 €	36,14 €	53,45 €	89,59 €	106,90 €	160,35 €
Switzerland* **	33,07 €	36,14 €	53,45 €	89,59 €	106,90 €	160,35 €
Slovakia*	24,79 €	27,98 €	35,42 €	63,40 €	70,84 €	106,26 €
Slovenia*	24,79 €	27,98 €	35,42 €	63,40 €	70,84 €	106,26 €
Spain*	28,07 €	31,85 €	40,63 €	72,48 €	81,26 €	121,89 €
Czech Rep.*	28,07 €	31,85 €	40,63 €	72,48 €	81,26 €	121,89 €
Hungary*	33,07€	36,14 €	53,45 €	89,59 €	106,90 €	160,35 €

* Possibility to deliver hazardous goods (LQ) with parcel service (exclusive VAT)
** Shipment is DAP - Duty unpaid and untaxed

Please contact us, if you require the shipping price for islands.
Many resin and hardener products are categorised as hazardous goods and it is forbidden to send them via parcel service. For this reason we dispatch these products by forwarding agencies. Please ask for shipping costs to your country.

Tel: +49 (0)5905 945 98 70 e-mail: info@hp-textiles.com

Practical Tips

On our website (Video & Download Portal) you can find various work instructions, tutorials and videos for free. Some examples are listed here. You can easily access the following QR codes.

Instructions

Mold Construction

IMC/MTI-Process

Epoxy Resins in Boat Construction

Basin Coating

Videos

Roof Coating

River Table

Vacuum infusion with 3D | CORE™ & MTI®

Automatic Valve for Resin Regulation - MTI® Valve

HP-PUR-Series

2-component topcoat for coatings in pond, pool & boat construction

Now also in

small containers

and at

more favourable

prices

HP-PUR-Series

- Surfaces with high abrasion resistance
- Suitable for pond and pool coatings ... but also for machinery, GRP parts, deck superstructures, furniture, containers, etc.
- Very good resistance to water and chemicals (if the dosage instructions for the chemicals used for swimming pool hygiene are observed)
- Suitable for permanent exposure to water
- Long-lasting colour stability due to good UV protection
- Excellent fullness of the paint film
- Ready for rolling and brushing (coating rollers HP-L1032 and HP-L1034)

Light blue RAL 5012

Light grey RAL 7035

Turquoise RAL 5018

HP-PUR-PLUS
glossy surface

HP-PURMA
matt surface

NEW

HP-PUR-PLUS-TEXTUR
structured & non-slip surface

Notes

Notes

WE ACT WITH RESPONSIBILITY:
SUSTAINABLE IN ALL AREAS

energy
We use solar power and heat pump technology to reduce emissions and conserve valuable resources.

mobility
We rely on bicycles and electric cars to get around efficiently, sustainably and in an environmentally friendly way.

environment
In our natural environment, we promote the ecological balance by enriching the diversity of trees.

packaging
By using recycled packaging material, we actively contribute to reducing waste and resource consumption.

products
Our materials enable the production of rotor blades and energy-saving lightweight components.

service provider
We select our partners carefully and rely on service providers who implement clear environmental and climate protection measures.

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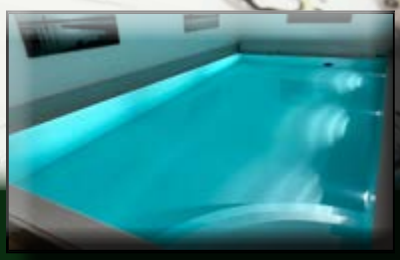
Teich Pool Dach

When it should become, as you like it



We offer complete sets for coating pools, ponds or roofs. All at attractive prices, as well as free advice before & during the implementation.

Inform and order online now:

Available in all RAL colours
High resistance to:
> continuous water exposure
> UV light

Advantages: of glass fabric + epoxy resin:

- ✓ **Problem-free „do it yourself“ system solution**
- ✓ **Crease-free design without weld seams**
- ✓ **More durable than conventional materials**
- ✓ **Stairs & curves are no problem!**
- ✓ **Coating with HP-PUR-PLUS**

Our team will be happy to assist you with any questions you may have about your project!

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