Working with Gelcoats

Innovative specialities for the composite industry

1. Delivery

2. Storage





Please observe! • Store under a roof Avoid direct sunlight Storage temperature approx. 20 °C
Humidity 50-75 %

3. Mould release and preparation of the material





Please observe! Protective clothing for the user Room temperature between 18-25 °C

- Recommendations given by the
- manufacturer for mould release Homogeneous stirring of the material
- in the original container

4. Application of gelcoat: by machine or by hand



Application by hand: •Ideally in two layers 300 µm each •Make sure the layers are uniformly thick





• Optimal air flow at the work place • Protective measures for employees • Dust-free environment

Please observe! • Use the hardener specified • Observe the quantity to be added in % (1,5-2,5 %)

Spray application: • Adjust the machine parameters according to the instructions given

- by the manufacturer • Apply two layers; the first layer
- should be approx. 200 µm thick
- Lead the gun perpendicular to the surface of the mould spraying cross-wise
- Keep a distance of 0,5 m!

6. When work is over



ase observe Close containers when work is over

- Bring the containers back where
- they are stored
- Clean machines and tools

Bonding pastes Powerful connections Gelcoats High gloss surface

- BÜFA[®]-Gelcoats are thoroughly tested by colorimetric measurements. Normal deviation in colour is extremely slight and deviates only from batch to batch. In spite of this, only one batch should be used for the same moulding.
- BÜFA[®]-Gelcoats are delivered ready to use. The addition of any additives changes the characteristics of the gelcoat and the working quality described in the technical information sheet.
- BÜFA[®]-Gelcoats are preaccelerated as a rule. Desired differences in gel time are controlled by the peroxide that is used. Please get in touch with our technical service department concerning the selection of a suitable curing system.
- BÜFA[®]-Gelcoats are guaranteed for a shelf-life of 3 month at room temperature. Protect containers from

BÜFA Gelcoat Plus GmbH & Co. KG Hohe Looge 2-8 26180 Rastede GERMANY Phone +49 4402 975-0 Fax +49 4402 975-300 gelcoatplus@buefa.de www.buefa.com www.buefagelcoatplus.com

A company of BÜFA and DSM Composite Resins







frost and high temperatures. Before using, stir the contents of each container carefully. Gelcoats should be visually examined upon delivery or at the latest before they are used, also checking pot-life, viscosity and colours if necessary to make sure they meet specifications. The characteristics of the gelcoat are described in the respective technical information sheets.

- BÜFA[®]-Gelcoats used for mould making have special working instructions which are found in the respective technical information sheet.
- If you need any help selecting the right BÜFA[®]-Gelcoats in regard to its requirement profile, e. g. lightfastness and weather resistance, mechanical or thermal properties or chemical resistance, do not hesitate to get in touch with us.
- Your BÜFA team wishes you lots of success!

The information given above is based on our current state of knowledge and experience. In view of the many factors that may influence working conditions and the application of our products, the user is not relieved from carrying out his own tests and experiments. Not legally binding warranty of certain properties or suitability for a particular purpose can be derived from this information. It is the responsibility of the receiver or user of the products to observe proprietary rights as well as existing laws and regulations. The latest version of the corresponding EU safety data sheet must also be observed.

You'll find technical data sheets and further information at www.buefagelcoatplus.com.

BÜFA®-Gelcoats

High gloss surface



A mere 500-600 µm layer thickness...

... and yet the choice of the right gelcoat is decisive for the final properties of fibre reinforced as well as cast mouldings.





That is why quality is first and foremost! Weathering ability, UV-light-resistance, degree of gloss, chemical resistance, corrosion resistance and of course the mechanical properties of a gelcoat surface as well are essentially dependent upon two things. First they depend on the raw materials used to formulate the gelcoat and second on how well the gelcoat is worked in practice.

Optimal for all uses

No matter whether OLDOPAL-, BÜFA®- or NEOGEL®-Gelcoats – gelcoats from BÜFA are a guarantee that only proved raw materials whose long term behaviour have been tested are used. A wide range of gelcoat and topcoat products in brush and spray quality are available to the user.

All of the gelcoats and topcoats are distinguished by their good working properties such as air release, flow and wetting of the mould. Optimal thixotropic properties prevent sagging on vertical surfaces and the reactivity of the base resins used in conjunction with the respective, especially formulated accelerators ensure fast and good curing.

Colour range

The options for pigmentation are practically unlimited. Along with the over 100 immediately available standard colours, nearly any shade the customer desires can be formulated. Our complete assortment consists of several thousand formulated OLDOPAL-UP-Pigment Pastes for colouring the complete range of gelcoats.

Our Eurotinter technology provides the highest degree of flexibility when it comes to tinting gelcoats. This system, which is well known in the paint and varnish industry, allows several thousand pre-programmed shades of colour to be fomulated also here.

Our recommendations for gelcoats

The recommendations presented above are only a few of the possibilities for gelcoat applications. For further information, get in touch with our Technical Service Department.

									Marine	Swim	ning Aut	- ve Sanita	y Mould- making	Rail vehicles	Wind energy		Travel trailers /	Transport / utility vehicles		Chemical resistant
System	Gelcoat	Name	Description	Resin base	Pigmentation	Viscosity (mPas) - Spindle/rpm	Gel time (min)	Elongation at break of base resin %	Ex- I terior te	In-					Rotor blades	Casing		var- nished	unvar- nished	
	771-Colour No.	OLDOPAL-STD-Gelcoat-S	Machine parts, industrial moulded parts	OP/IP	nearly unlimited	13.500 - 4/4	14	6,5		✓										
- e Standaro	772-Colour No.	OLDOPAL-STD-Gelcoat-H	Machine parts, industrial moulded parts	ОРЛР	nearly unlimited	17.500 - 4/4	16	6,5		~										
	782-Colour No.	OLDOPAL-STD-Topcoat-H	For sealing industrial moulded parts, no permanent water loads	OP/IP	nearly unlimited	17.500 - 4/4	16	6,5		✓ ✓	√			✓		✓	~		~	
	717-8384	OLDOPAL-Gelcoat-sandable-SV	Gelcoat for moulded parts that are varnished, good sanding properties	OP/IP	light grey	13.500 - 4/4	14	6,5			(~			(√)				~		
San dabl	718-8384	OLDOPAL-Gelcoat-sandable-H	Gelcoat for moulded parts that are varnished, good sanding properties	OP/IP	light grey	17.500 - 4/4	16	6,5			(~	-		(√)				~		
	775-Colour No.	BÜFA®-Arctic-Gelcoat-ISO-S	For strong weathering or hydrolytic loads, fulfills DNV *1 *3	IP	nearly unlimited	13.500 - 4/4	14	3,9	~	✓	(~					√	✓		~	
ion	776-Colour No.	BÜFA®-Arctic-Gelcoat-ISO-H	For strong weathering or hydrolytic loads, fulfills DNV *1 *3	IP	nearly unlimited	17.500 - 4/4	16	5,3	~	✓	(~					~	~		~	
xterio	786-Colour No.	BÜFA®-Arctic-Topcoat-ISO-H	For sealing parts subjected to strong weathering and hydrolytic loads	IP	nearly unlimited	17.500 - 4/4	14	5,3	~	✓	(~					~	✓		~	
app	756-9999	BÜFA®-Arctic-Gelcoat-SP	Gelcoat filler for sealing and repairing parts subjected to strong weathering and hydrolytic loads	IP	nearly unlimited	425.500 - 95/5	16	3,9	~	✓	(*					~	~		~	
	610-Colour No.	Neogel® NPG 8373	For high chemical, thermal or hydrolytic loads, spraying quality	IP/NPG	nearly unlimited	33.000* - 4/2	10*	4,00	~	(√)	~								(√)
	610-0052	Neogel® NPG 8373-I-0052	Sanitary gelcoat, lightstabilised, spraying quality	IP/NPG	natural-transparent	16.000 - 4/2*	10*	4,00	(√)	(√) 🗸	~					~			(√)
	624-Colour No.	Neogel® NPG 8375	For high chemical, thermal or hydrolytic loads, brushing quality	IP/NPG	nearly unlimited	52.500 - 4/20	8*	4,00	~	(√)	~								(√)
	625-Colour No.	Neogel® NPG 8375-E-Topcoat	For high chemical, thermal or hydrolytic loads, brushing quality	IP/NPG	nearly unlimited	25.000* - 4/2	8*	4,00	~	(√)	~								(√)
mical	748-Colour No.	BÜFA®-Marine-NPG-Gelcoat-S	Boat construction (DNV) *1, for high chemical, thermal or hydrolytic loads *3, spraying quality	IP/NPG	nearly unlimited	18.000 - 4/4	14	3,5	~			~								(√)
'sis/che	749-Colour No.	BÜFA®-Marine-NPG-Gelcoat-H	Boat construction (DNV) *1, for high chemical, thermal or hydrolytic loads *3, brushing quality	IP/NPG	nearly unlimited	23.000 - 4/4	14	3,5	~			~								(√)
hydroly	759-Colour No.	BÜFA®-Marine-NPG-Topcoat-H	Boat construction (DNV) * ¹ , for sealing parts subjected to high chemical, thermal or hydrolytic loads * ³	IP/NPG	limited	13.000 - 4/4	14	3,5	~											(🗸)
tterior application	752-9999	BÜFA®-Swim-NPG-Gelcoat-S	Gelcoat for swimming pools, spraying quality	IP/NPG	limited	18.000 - 4/4	11	3,5		~										
	753-9999	BÜFA®-Swim-NPG-Gelcoat-H	Gelcoat for swimming pools, brushing quality	IP/NPG	limited	29.500 - 4/4	14	3,5	~											
	778-Colour No.	OLDOPAL-NPG-Gelcoat-S	"Automotive", for strong weathering or hydrolytic loads, fulfills DNV \star1 \star3	IP/NPG	nearly unlimited	13.500 - 4/4	14	4			~						~		~	(√)
	779-Colour No.	OLDOPAL-NPG-Gelcoat-H	"Automotive", for strong weathering or hydrolytic loads, fulfills DNV \star1 \star3	IP/NPG	nearly unlimited	18.000 - 4/4	16	4			~						~		\checkmark	(√)
ü	620-0080	Neogel® Eco 9373-W-2	Gelcoat for swimming pools/boat construction/exterior parts, low-emission, spraying quality	ISO/NPG	limited	39.000 - 4/2	10 - 13*	< 3,5	~	(√)	~					~			
	620-9511	Neogel® Eco 9373-W-9511	Gelcoat for swimming pools/boat construction/exterior parts, low-emission, spraying quality	ISO/NPG	dark blue	30.000 - 4/2	14 - 17	< 3,5	~	(√)	~					~			
	621-9010	Neogel [®] Eco 9375-W-2	Gelcoat for swimming pools/boat construction/exterior parts, low-emission, brushing quality	ISO/NPG	limited	54.000 - 4/2	14 - 16	< 3,5	~	(√)	~					~			
bu	500-0104 500-0108 500-0110 500-0112	Neogel® VE 8393-W-0100 Black VE Spray Tooling Gel Neogel® VE 8393-W-9617 Light green VE Spray Tooling Gel Neogel® VE 8393-W-0520 Orange VE Spray Tooling Gel Neogel® VE 8393-W-9737 Grey VE Spray Tooling Gel	Gelcoat for GRP mould-making, spraying quality	BPA/VEU	limited	33.000 - 4/2	12	not determined					~							
Mould-maki	500-0107 500-0109 500-0111 500-0113	Neogel® VE 8394-W-0100 Black VE Brush Tooling Gel Neogel® VE 8394-W-9617 Light green VE Brush Tooling Gel Neogel® VE 8394-W-0520 Orange VE Brush Tooling Gel Neogel® VE 8394-W-9737 Grey VE Brush Tooling Gel	Gelcoat for GRP mould-making, brushing quality	BPA/VEU	limited	33.000 - 4/2	12	not determined					~							
	651-0001	Neogel® VE 8393-I-1	Gelcoat for GRP mould-making, spraying quality	BPA/VEU	natural	33.000 - 4/2	14	not determined					~							
	652-0001	Neogel® VE 8394-I-1	Gelcoat for GRP mould-making, brushing quality	BPA/VEU	natural	53.000 - 4/2	14	not determined					~							
etarding	708-Colour No.	BÜFA®-Firestop S 250-SV	Gelcoat in a spraying quality, S4/SR2/ST2 according to DIN 5510 part 2 *2	IP	limited	17.5000 - 5/5	13	8,2						~		(√)				
	728-Colour No.	BÜFA®-Firestop S 250-V	Gelcoat in a brushing quality, S4/SR2/ST2 according toDIN 5510 part 2 *2	IP	limited	30000 - 5/5	13	8,2						~		(√)				
me re	722-0115	BÜFA [®] -Firestop S 260-SV natur	Fire protection gelcoat SV in a spraying quality	OP/NPG	limited	11.500 - 5/5	9 - 14	3,4						~		(√)				
Flai	722-0270	BÜFA®-Firestop S 270	Fire protection gelcoat, spraying, brushing and rolling quality	BPA/VEU	grey	32.000 - 5/5	6,5 - 11	2 - 3						~		~				
	719-Colour No.	OLDOPAL-Topcoat LT 719-V	Coatings for swimming pools, corrosion protection, tanks/containers	Special resin	limited	25.000 - 5/5	17	2,5		~										(√)
Special	724-Colour No.	OLDOPAL-VE-Gelcoat	Vinyl ester gelcoat for extreme chemical loads, not resistant to weather, not pre-accelerated , brushing quality	VE	limited	25.000 - 5/5	13	6,1												(√)
	750-Colour No.	BÜFA®-Megaflex-ISO-Gelcoat-S	Gelcoats for Rotor blades of wind turbines, spraying quality	IP	limited	13.000 - 4/4	14	approx. 100							~					

Abbreviations for base resins: IP - isophthalic acid, OP - orthophtalic acid, THP - tetrahydrophthalic acid, VE - vinyl ester, NPG - neopentyl glycol, BPA/VEU: Bisphenol A vinyl ester urethan

- *1 approved according to DNV (Det Norske Veritas)
- *2 with corresponding laminate construction,
 *3 If subjected to chemical loads, get in touch with our Technical Service Department first.
 Mean values measured with Brookfield DV II at 20 °C, *Mean values measured with Brookfield DV II at 25 °C
- Viscosity: Further specifications:

Approval: Comment:

- e.g. measured with spindle 4 at 4 rpm (4/4) ✓ suitable
- (✓) conditionally suitable

