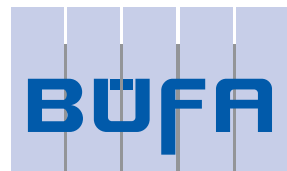


REACTIVE RESINS

GELCOATS AND TOPCOATS

Gelcoats and
Topcoats





REACTIVE RESINS

GELCOATS AND TOPCOATS

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 NEO-GEL[®]-Gelcoats – Gelcoats from BÜFA are a guarantee that only proved raw materials whose long term behavior 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 new 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 formulated also here.



HIGH PERFORMANCE GELCOATS

GELCOATS AND TOPCOATS

Product name	BÜFA®-MARINE-NPG-Gelcoat-S	BÜFA®-MARINE-NPG-Gelcoat-H	BÜFA®-MARINE-NPG-Topcoat-H	BÜFA®-MEGAFLEX-ISO-Gelcoat-S
Product No.	748 / 548 (Eurotinter)	749 / 549	759 / 559	750
Processing	Spray quality	Brush quality	Brush quality	Spray quality
Resin base	ISO/NPG	ISO/NPG	ISO/NPG	ISO
Pigmentation	almost unlimited	almost unlimited	almost unlimited	limited
Viscosity (mPa.s) – spindle/rpm	18.000 – 4/4	28.000 – 4/4	22.000 – 4/4	13.000 – 4/4
Styrene content %	38	31	31	36
Peroxide Accelerator	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated
Gel time (min)	14	14	14	14
Tmax °C	165	165	165	125
Tensile Strength (MPa)	85	85	85	approx. 9,3
Tensile-E-Modulus (MPa)	3.720	3.720	3.720	approx. 70
Elongation at break %	3.5	3.5	3.5	approx. 100
Heat deflection temperature °C	95	95	95	not applicable
Application areas Comments	Marine	Marine	Marine	Rotor blades for wind energy plants

Resin base

ISO: Isophthalic acid
 OPA: Orthophthalic acid
 THA: Tetrahydrophthalic acid
 VE: Vinyl ester
 NPG: Neopentylglycol

Viscosity

Mean values measured with Brookfield DV II at 20 °C
 * Mean values measured with Brookfield DV II at 25 °C
 More data.: e. g. measured with spindle 4 – at 4 rpm (4/4)

Reactivity

Measured on 100 g-sample at 20 °C at e.g. 25 °C
 Gel time: time from 20 °C - 30 °C (mean value)
 *Gel time: time from 25 °C – 35 °C (mean value)
 Tmax: Maximum temperature of the 100 g-sample

Approval

*1 approval from DNV (Det Norske Veritas)
 *2 approval from GL (Germanischer Lloyd)

Peroxides and Accelerators

Akzo Nobel®; Butanox M-50, Butanox LPT-IB94, Trigonox 61, Co., Cyclonox LR
 742-0062: OLDOPAL®-Accelerator (Co 1%- solution)
 742-0064: OLDOPAL®-Accelerator complex (Co/Amine)

Mechanical Values

Measured on cured, pure resin samples of the base resin, post-cured according to the values in the technical leaflet.
 Tensile strength according to ISO 527/2
 Tensile E-modulus according to ISO 527/2
 Elongation a break according to ISO 527/2
 Heat deflection temperature according to ISO 75-A

This legend also refers to the following tables of this categorie.

CLASSICS

Product name	OLDOPAL®-STD-Gelcoat-S	OLDOPAL®-STD-Gelcoat-H	BÜFA® Arctic-Gelcoat-ISO-S	BÜFA® Arctic-Gelcoat-ISO-H	OLDOPAL®-NPG-Gelcoat-S	
Product No.	771- Colour-No.	772- Colour-No.	775- Colour-No.	776- Colour-No.	778- Colour-No.	
Processing	Spray quality	Brush quality	Spray quality	Brush quality	Spray quality	
Resin base	OPA/ISO	OPA/ISO	ISO	ISO	ISO/NPG	
Pigmentation	almost unlimited	almost unlimited	almost unlimited	almost unlimited	almost unlimited	
Viscosity (mPa.s) – spindle/rpm	13.500 – 4/4	17.500 – 4/4	13.500 – 4/4	17.500 – 4/4	13.500 – 4/4	
Styrene content %	31	30	35	32	36	
Peroxide Accelerator	1,5 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated	
Gel time (min)	14	16	14	16	14	
Tmax °C	155	155	165	155	155	
Tensile Strength (MPa)	48	48	55	55	85	
Tensile-E-Modulus (MPa)	3.000	3.000	3.400	3.400	3.700	
Elongation at break %	6,5	6,5	5,3	5,3	4,0	
Heat deflection temperature °C	80	80	88	88	94	
Application areas Comments	Machine parts, furniture, technical wares, canoes	Machine parts, furniture, technical wares, canoes	For strong weathering or hydrolysis loads, meets DNV 1 *	For strong weathering or hydrolysis loads, meets DNV 1 *	For highest chemical, thermal and hydrolytic loads, meets DNV *1	

SPECIAL-GELCOATS

Product name	OLDOPAL®-VE-Gelcoat	OLDOPAL®-Tooling-Gelcoat L 604 natural	OLDOPAL®-Gelcoat S 250-V	OLDOPAL®-IND-Gelcoat-H	OLDOPAL®-IND-Topcoat-H	
Product No.	724- Colour-No.	722-0010	728- Colour-No.	722-0812	709-0811	
Processing	Brush quality	Brush quality	Brush quality	Brush quality	Brush quality	
Resin base	VE	ISO	ISO	OPA	OPA	
Pigmentation	limited	limited	limited	industrial white	industrial white	
Viscosity (mPa.s) – spindle/rpm	25.000 – 5/5	35.000 – 5/5	30.000 – 5/5	30.000 – 5/5	55.000 – 5/5	
Styrene content %	37	38	16	24	22	
Peroxide Accelerator	2 % Trigonox 239 +2 % 742-0062 non preaccelerated	2 % Butanox M-50 +1 % 742-0062 non preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	
Gel time (min)	13	12	13	12	12	
Tmax °C	155	175	105	145	135	
Tensile Strength (MPa)	95	90	52	80	80	
Tensile-E-Modulus (MPa)	3.600	3.700	2.400	3.700	3.700	
Elongation at break %	6,1	4,6	8,2	4,2	4,2	
Heat deflection temperature °C	105	93	57	108	108	
Application areas Comments	Vinylester Gelcoat for extreme chemical loads, not suitable for weathering loads	Standard Tooling Gelcoat for moulds destined to hand lay-up and fibre spray process	Gelcoat with flame retardant properties	Low priced Gelcoat for industrial parts	Low priced Topcoat for industrial parts	



GELCOATS AND TOPCOATS

OLDOPAL®-NPG-Gelcoat-H	Neogel NPG 8373	Neogel NPG 8375	OLDOPAL®-Topcoat LT 719-V	Neogel NPG 8375-E-Topcoat	OLDOPAL®-STD-Topcoat-H	BÜFA®-Arctic-Topcoat-ISO-H
779- Colour-No.	S610- Colour-No.	624- Colour-No.	719- Colour-No.	625- Colour-No.	782- Colour-No.	786- Colour-No.
Brush quality	Spray quality	Brush quality	Brush quality	Brush quality	Brush quality	Brush quality
ISO/NPG	ISO/NPG	ISO/NPG	special resin	ISO/NPG	OPA/ISO	ISO
almost unlimited	almost unlimited	almost unlimited	limited	almost unlimited	almost unlimited	almost unlimited
18.000 – 4/4	33.000 * – 4/2	52.500 * – 4/2	25.000 – 5/5	25.000* – 4/2	17.500 – 4/4	17.500 – 4/4
30	38	32	33	32	30	29
1,5 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated	1,5 % Butanox M-50 preaccelerated
16	10*	8*	17	8*	16	14
155	180*	165*	145	165*	155	165
85	85	85	80	85	48	55
3.700	3.700	3.700	Flexural modulus 3.900	3.700	3.000	3.400
4,0	4,0	4,0	2,5	4,0	6,5	5,3
94	94	94	100	94	80	88
For high chemical, thermal and hydrolytic loads, meets DNV *1	For high chemical, thermal and hydrolytic loads	For high chemical, thermal and hydrolytic loads	Topcoat for swimming-pools, anti-corrosive protection, container	Topcoat for swimming-pools, anti-corrosive protection, container	Coating of technical mouldings, furniture, canoes	For the coating of mouldings which are subjected to strong weathering and hydrolytic loads

OLDOPAL®-Gelcoat-sandable-V	OLDOPAL®-Gelcoat-sandable-SV	OLDOPAL®-Gelcoat-S250-SV	Neogel NPG 8373 / 0052	Vetrophen Gelcoat-S 743/ Carrara grey (sandable)	Vetrophen Gelcoat-S 793/ Carrara grey (sandable)	BÜFA-Firestop® S260 R natural
722-0081	722-0085	708- Colour-No.	610-0052	645-7047	645-8384	644-0112
Brush quality	Spray quality	Spray quality	Spray quality	Spray quality	Spray quality	Roller quality
OPA	OPA	ISO	ISO/NPG	OPA/NPG	OPA/NPG	OPA/NPG
limited	limited	limited	natural transparent	grey	grey	grey-white
92.000 – 5/5	40.000 – 5/5	17.500 – 5/5	16.000 – 4/2*	9.000 – 4/4	1.200 – 3/20	6.800 – 5/5
30	35	23	47	33	33	33
2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	2 % Butanox M-50 preaccelerated	1,5 % Trigonox 44 B preaccelerated	2 % Butanox M-50 preaccelerated
12	22	13	10*	8	8	12
115	95	95	200*	160	160	90
40	40	52	85	56	56	56
2.100	2.100	2.400	3.700	2.900	2.900	2.900
16	16	8,2	4,0	3,4	3,4	3,4
40	40	57	94	64	64	64
Excellent sanding properties, for parts which are to be painted afterwards	Excellent sanding properties, for parts which are to be painted afterwards	Gelcoat with fire protection properties	Gelcoat for sanitary ware, UV-stabilized	Sandable Gelcoat for the construction of machines and vehicles	Sandable Gelcoat for the RTM-process (60-80° C mould temperature)	Fire protection Gelcoat, special roller consistency

