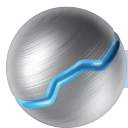


POWERFUL CONNECTIONS

Bonding Pastes, Fillers & High Performance Adhesives



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Bonding Pastes, Fillers and High Performance Adhesives

Quality...

... is what the extensive line of BÜFA®-Bonding Pastes is about. Here you will find the right adhesive/bonding paste for your individual requirements at a glance.

Filled or unfilled products, with or without fibre reinforcement, with low specific gravity for bonding sandwich constructions, low-shrink formulated, elastic or tinted bonding pastes and many other variations are available to our customers.

Oriented to the six categories listed you will quickly find the right bonding paste for your application. You don't have the right product for your purpose? No problem!

Just give us a call and together we will find a solution. It's very important for us to be up to date on the latest requirements.

Proved, innovative and tailor-made products – we provide what you need.

“Are you bonding already or still using screws?”

ITW PLEXUS – High performance adhesives

ITW PLEXUS stands for high quality construction adhesives. A combination of easy handling and outstanding adhesive strength guarantee that PLEXUS adhesives are the solution for a wide range of applications.

PLEXUS construction adhesives have excellent adhesive properties for composite materials, engineering plastics and metals and reduce the need to use conventional, mechanical fastenings.

PLEXUS adhesives can be used in many branches e.g.:

- Boat construction
- Transport sector
- Automotive industry and
- Building industry

From a cartridge (50-400 ml) for smaller applications all the way to bulk use (20-200 l) for larger projects.

Our recommendations for you:

Working parameters

- Use at least 1.5 % MEKP
- Working temperature between 18-24 °C
- The surface should be clean and free of grease and dust
- Low resin surface in bonding area
- Sand the substrate before bonding
- Prime wood and metals

Your advantages

- High-strength bonding of different materials
- High fatigue strength, impact resistance and elongation at break
- Promotes processing (levelling, round edges)
- Optimal surface quality through low-shrink systems
- Reduction of weight, vibrations and noise



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Bonding Pastes and Fillers, High Performance Adhesives

Product name	BÜFA®-Bonding Paste 0110	BÜFA®-Bonding Paste 0111	BÜFA®-Bonding Paste 0114	BÜFA®-Bond 001	BÜFA®-Bonding Paste 0185	BÜFA®-Bonding Paste 0250	BÜFA®-Bonding Paste 0588	BÜFA®-Bonding Paste 0591
Art. No.	740-0110	740-0111	740-0114	660-0001	740-0185	740-0250	740-0588	740-0591
Category	High strength bondings	High strength bondings	High strength bondings	Structural bondings	Structural bondings	Structural bondings	Structural bondings	Structural bondings
Resin base	BPA/VE	BPA/VE	BPA/VE	/	THP	OP	THP	IP
Colour	opaque / natural	opaque / natural	opaque / natural	green	green	blue	grey	grey
Peroxide indicator	no	no	no	ja	no	no	no	no
Viscosity [mPa.s]	1,800,000	1,800,000	1,800,000	580,000	550,000	950,000	600,000	500,000
Brookfield 20 °C (U/Min)	96 / 3	96 / 3	96 / 3		7 / 5	95 / 5	7 / 5	7 / 5
Pre-accelerated	Co	Co	Co	BPO / Amine (pre-assembled)	Co	Co	Co	Co
Peroxide	2,5 % by weight medium reactive MEKP	2,5 % by weight medium reactive MEKP	2,5 Vol% medium reactive MEKP	forced mixing resin / hardener = 10 to 1	2 % by vol. higher reactivity MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP
Gel time [min]	at	60 at 25 °C	35	10	27	20	10	13
Curing time [min]			60	14	37	35	17	22
Density [g/mL]	1.2	1.2	1.2	1.3	1.4	1.4	1.3	1.2
Machine metering (Gamma4/Theta11)	yes	yes	yes	yes	no	yes	no	no
Fibre reinforcement	no	no	no	yes	yes	no	yes	yes
Certification	GL approval	GL approval	GL approval	no	no	no	no	no
Range of use/ comments	For bonding rotor blades in wind energy plants, boat construction, bonding pipes, high dynamic loads in a large temperature range	Like 740-0110, equipped with a higher thixotropic behavior, after the application step with a bonding paste machine.	Like 740-0110, equipped with a faster reactivity	Cartridge adhesive – for structural bonding and fixation	Standard bonding paste	Standard bonding paste	Standard applications; high reactive; also for thin layers; cures tack-free	Standard bonding paste like 0588 but on an isophthalic acid base

Bonding Pastes, Fillers and High Performance Adhesives

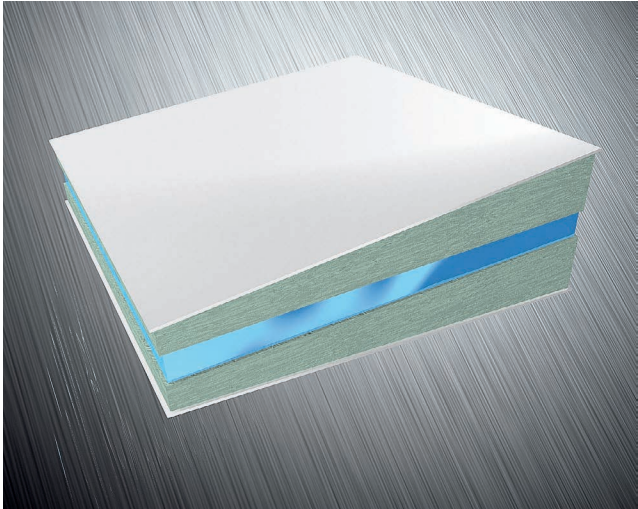


Produktname	BÜFA®-Bonding Paste 0188	BÜFA®-Bonding Paste 0600	BÜFA®-Bonding Paste 0601	BÜFA®-Bonding Paste 0650	BÜFA®-Bonding Paste 0015	BÜFA®-Bonding Paste 0072	BÜFA®-Bonding Paste 0073	BÜFA®-Bonding Paste 0590
Art. No.	740-0188	740-0600	740-0601	740-0650	740-0015	740-0072	740-0073	740-0590
Category	Standard bondings	Standard bondings	Standard bondings	Standard bondings	Sandwich constructions	Sandwich constructions	Sandwich constructions	Sandwich constructions
Resin base	THP	OP	OP	THP	OP	OP	OP	IP
Colour	blue	blue	blue	blue	blue	blue	blue	grey
Peroxidindikator	yes (blue --> green)	yes (blue --> beige)	yes (blue --> beige)	yes (blue --> beige)	yes (blue --> white)	no	yes (blue --> white)	no
Viscosity [mPa.s]	700,000	600,000	1,100,000	1,000,000	400,000	300,000	400,000	680,000
Brookfield 20 °C (U/Min)	7 / 5	7 / 5	96 / 3	95 / 5	95 / 5	95 / 5	95 / 5	7 / 5
Pre-accelerated	Co	Co	Co	Co	Co	Co	Co	Co
Peroxide	2 % by weight higher reactive MEKP	2 % by vol. medium reactive MEKP	2 % by weight higher reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. higher reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP
Gel time [min]	27	37	25	45	29	35	29	7
Curing time [min]	36	60			50	50	50	15
Density [g/mL]	0.8	1.4	1.5	1.3	0.9	0.7	0.6	0.9
Machine metering (Gamma4/Theta11)	no	no	yes	yes	no	no	no	no
Fibre reinforcement	yes	yes	no	no	no	no	no	yes
Certification	no	no	no	no	no	GL approval	GL approval	no
Range of use / comments	Bonding paste for standard bonding, filling applications (gap filling) up to 10 cm, light-weight applications in boat construction	Standard bonding paste	Standard bonding paste	Standard adhesive, impact-modified, good thixotropic stability after machine processing	Sandwich adhesive	Sandwich adhesive, boat construction	Sandwich adhesive, boat construction	Fibre reinforced, light-weight bonding paste for sandwich constructions on an isophthalic acid base

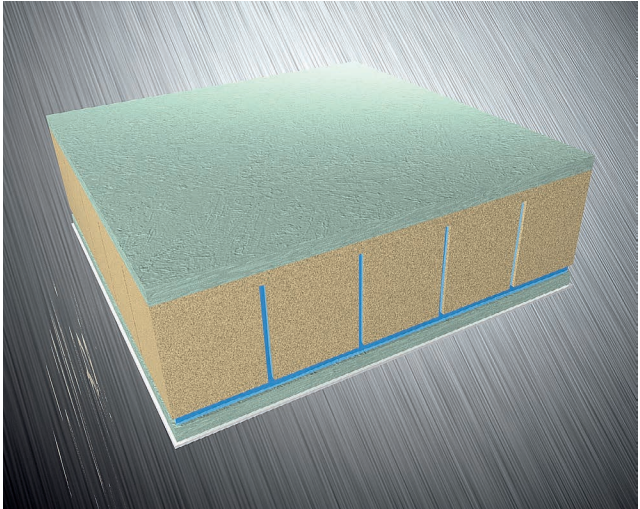
Produktname	BÜFA®-Bonding Paste 0181	BÜFA®-Bonding Paste 0182	BÜFA®-Bonding Paste 0139	BÜFA®-Bonding Paste 0141	BÜFA®-Fine Body Filler	BÜFA®-Fine Body Filler Spray	BÜFA®-Bonding Paste 0119	BÜFA®-Bonding Paste 0410
Art. No.	740-0181	740-0182	740-0139	740-0141	740-0001	740-0002	740-0119	740-0410
Category	Optimal laminate constructions	Optimal laminate constructions	Optimal laminate constructions	Optimal laminate constructions	Special bonding paste	Special bonding paste	Special bonding paste	Special bonding paste
Resin base	THP	THP	THP	THP	THP	THP	BPA/VE	IP / NPG
Colour	brown / natural	violet / natural	yellow / natural	white	grey	grey	grey / natural	violet / natural
Peroxidindikator	no	no	no	no	no	no	no	no
Viscosity [mPa.s]	140,000	550,000	1,800,000	500,000	2,250,000	23,000	1,800,000	500,000
Brookfield 20 °C (U/Min)	7 / 5	7 / 5	7 / 2	7 / 5	96 / 2,5	6 / 5	7 / 2	95 / 5
Pre-accelerated	Co	Co	Co / Amine	Co / Amine	Co / Amine	Co	Co	Co
Peroxide	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP	2 % by vol. medium reactive MEKP
Gel time [min]	33	15	35	20	15	8	35	24
Curing time [min]	44	30		34	32	16		42
Density [g/mL]	1.3	1.2	1.3	1.3	1.8	2.5	1.4	1.2
Machine metering (Gamma4/Theta11)	no	no	no	no	no	yes	no	yes
Fibre reinforcement	yes	yes	yes	yes	no	no	yes	no
Certification	no	no	GL approval	GL approval	no	no	GL approval	no
Range of use / comments	Standard applications; also suitable as a levelling resin compound; "liquid laminate" low-shrink, higher fibre content	Levelling compound ("liquid laminate")	Elastic, universal bonding paste for many applications	Elastic, universal bonding paste for many applications	model-making with good smoothing and sanding properties	Spray filler for model-making with good sanding properties	VE Bonding Paste with a HDT form 105°C.	For chemical resistant applications; also very suitable for joining rigid PVC

Abbreviations for resin base: VE – vinyl ester, OP – orthophthalic acid, IP – isophthalic acid, THP – tetrahydrophthalic acid, NPG – neopentyl glycol – BPA – bisphenol A

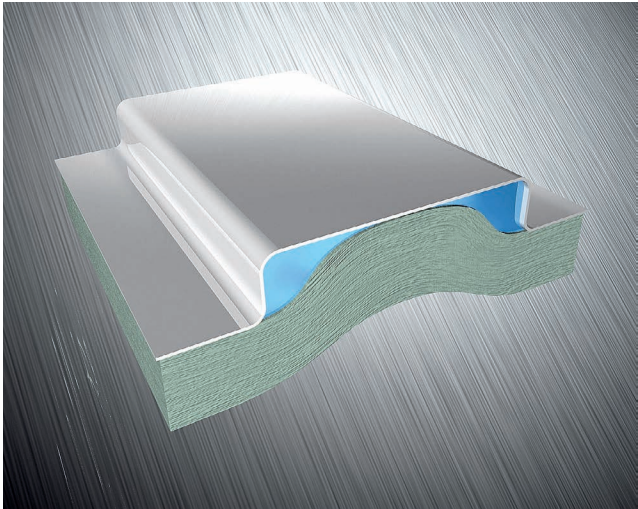
Bonding Pastes, Fillers and High Performance Adhesives



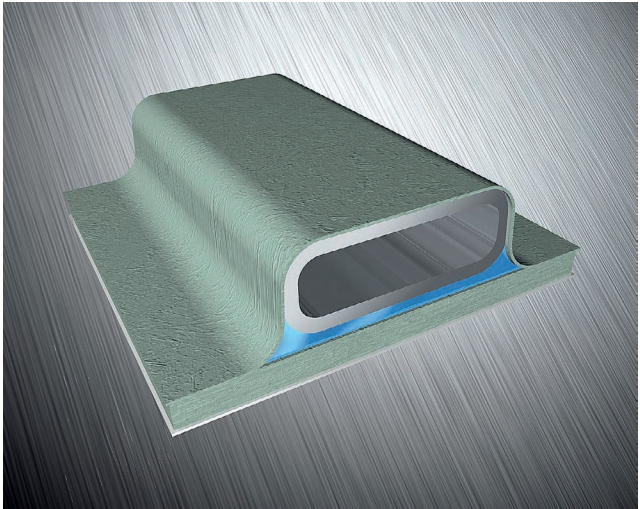
Structural and standard bondings



Sandwich constructions



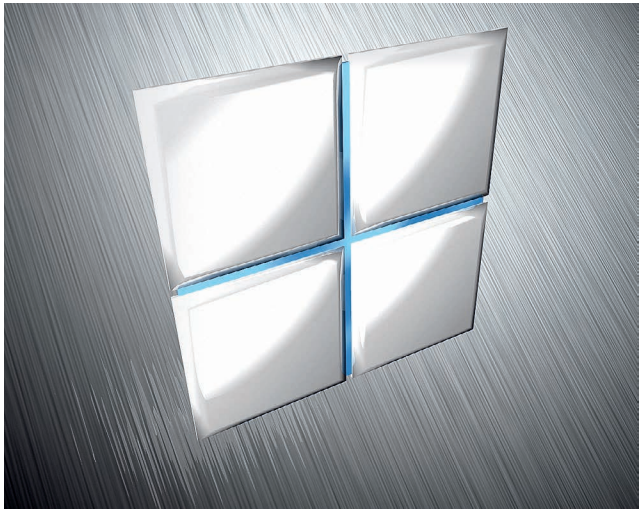
Optimal laminate constructions



Bonded joints with metal and wood



High strength bondings

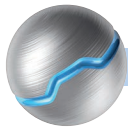


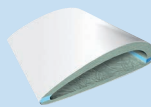
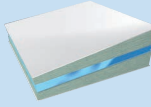
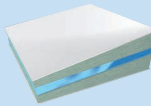
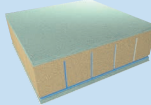
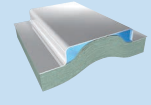
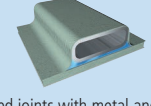

Special bonding pastes

The data given above is approximate information without warranty. The latest, detailed information is found in the respectively valid Technical Information Sheet and/or the corresponding EU Safety Data Sheet which should also be observed.

Bonding Pastes, Fillers and High Performance Adhesives

Find the appropriate product solution for your application in our extensive range of products.



Category	Art. No.	Product name	Description	Resin base	Range of use / comments	Marine						Rail vehicles		Automotive		Other		
						Repair	Deck + hull	Interior walls	Sandwich constructions	Inliner + hull	Deck + inside roof lining	Levelling	Sandwich constructions	Structural bonding	Sandwich constructions	Structural bonding	Levelling	Mould construction
 For high strength bondings	740-0110	BÜFA®-Bonding Paste 0110	Bonding paste with outstanding mechanical and chemical properties	BPA/VE	For bonding rotor blades in wind energy plants, boat construction, bonding pipes, high dynamic loads in a large temperature range		✓	✓		✓	✓			✓		✓	✓	✓
	740-0111	BÜFA®-Bonding Paste 0111	Bonding paste with outstanding mechanical and chemical properties, equipped with a higher thixotropic behavior, after the application step with a bonding paste machine	BPA/VE	For bonding rotor blades in wind energy plants, boat construction, bonding pipes, high dynamic loads in a large temperature range		✓	✓		✓	✓			✓		✓	✓	✓
	740-0114	BÜFA®-Bonding Paste 0114	Bonding paste with outstanding mechanical and chemical properties, like 740-0110 but with a shorter gel time	BPA/VE	Boat construction, bonding pipes, high dynamic loads in a large temperature range		✓	✓		✓	✓			✓		✓	✓	✓
 For structural bondings	660-0001	BÜFA®-Bond 001	Cartridge adhesive (10 to 1 - BPO/amine curing)	/	Cartridge adhesive – for structural bonding and fixation	✓								✓		✓		
	740-0185	BÜFA®-Bonding Paste 0185	Bonding paste with very good mechanical properties, good thixotropy	THP	Standard bonding paste			✓		✓	✓							
	740-0250	BÜFA®-Bonding Paste 0250	Bonding paste with a wide application spectrum	OP	Standard bonding paste			✓								✓		
	740-0588	BÜFA®-Bonding Paste 0588	Bonding paste with good mechanical properties, good thixotropy	THP	Standard applications, high reactive, also for thin layers, cures tack-free			✓						✓		✓		
	740-0591	BÜFA®-Bonding Paste 0591	Bonding paste with a wide application spectrum	IP	Standard bonding paste like 0588 but on an isophthalic acid base		✓									✓		
 For standard bondings	740-0188	BÜFA®-Bonding Paste 0188	Bonding paste for thicker layers (up to 10 cm) with low density, good thixotropy	THP	Bonding paste for standard bonding, filling applications (gap filling) up to 10 cm, light-weight applications in boat construction			✓			✓	✓				✓		
	740-0600	BÜFA®-Bonding Paste 0600	Bonding paste for versatile use, medium gel time	OP	Standard bonding paste			✓									✓	
	740-0601	BÜFA®-Bonding Paste 0601	Bonding paste for versatile use, medium gel time	OP	Standard bonding paste			✓									✓	
	740-0650	BÜFA®-Bonding Paste 0650	Bonding paste with a wide application spectrum	THP	Standard adhesive, impact-modified, good thixotropic stability after machine processing		✓	✓				✓						
 For sandwich constructions	740-0015	BÜFA®-Bonding Paste 0015	Sandwich bonding paste with low density	OP	Sandwich adhesive				✓			✓	✓		✓			
	740-0072	BÜFA®-Bonding Paste 0072	Sandwich bonding paste with low density	OP	Sandwich adhesive, boat construction				✓				✓		✓			
	740-0073	BÜFA®-Bonding Paste 0073	Sandwich bonding paste with low density	OP	Sandwich adhesive, boat construction				✓			✓	✓		✓			
	740-0590	BÜFA®-Bonding Paste 0590	Light-weight sandwich adhesive	IP	Fibre reinforced, light-weight bonding paste for sandwich constructions on an isophthalic acid base				✓				✓		✓			
 For optimal laminate constructions	740-0181	BÜFA®-Bonding Paste 0181	Standard applications; also very suitable as a levelling resin compound; "liquid laminate", low-shrink, higher fibre content	THP	Standard applications, also suitable as a levelling resin compound, "liquid laminate" low-shrink, higher fibre content							✓				✓		
	740-0182	BÜFA®-Bonding Paste 0182	Liquid laminate with higher exothermic character, high viscosity	THP	Levelling compound ("liquid laminate")							✓		✓			✓	
 Bonded joints with metal and wood	740-0139	BÜFA®-Bonding Paste 0139	Bonding paste for joining metal and wood, elastic	THP	Elastic, universal bonding paste for many applications			✓						✓		✓		
	740-0141	BÜFA®-Bonding Paste 0141	Bonding paste for joining metal and wood, elastic	THP	Elastic, universal bonding paste for many applications			✓						✓		✓		
 Special bonding pastes	740-0001	BÜFA®-Fine Body Filler	Repair filler formulated for brushing	THP	Fine filler for model-making with good smoothing and sanding properties	✓											✓	
	740-0002	BÜFA®-Fine Body Filler Spray	Repair filler formulated for spraying	THP	Spray filler for model-making with good sanding properties	✓											✓	
	740-0119	BÜFA®-Bonding Paste 0119	VE Bonding Paste with a HDT form 105°C.	BPA/VE	For chemical resistant applications like pipe and tank constructions, for applications where a high HDT plays an important role.													✓
	740-0410	BÜFA®-Bonding Paste 0410	Chemical resistant bonding paste, good adhesion to PVC hard	IP/NPG	For chemical resistant applications, also very suitable for joining rigid PVC hard													✓

The recommendations presented above are a few of the possibilities for using bonding pastes. For more detailed information, please get in touch with our Technical Service Department.

Abbreviations for base resins: VE – vinyl ester, OP – orthophthalic acid, IP – isophthalic acid, THP – tetrahydrophthalic acid, NPG – neopentyl glycol – (✓) = Please get in touch with our Technical Service Department.

Bonding Pastes, Fillers and High Performance Adhesives



The following table will help you to find the right adhesive for your application. All materials marked with a check can be fixed with the respective adhesive, e.g. MA 300 Gelcoats, GRP, aluminium, stainless steel, etc..

Plexus Construction Adhesive for boats	Plexus Construction Adhesive for utility vehicles	Plexus Construction Adhesive for motor vehicles	Plexus Construction Adhesive for technical applications
Stronger bonding than the laminate	Fast cure at room temperature, saves production time	Fast processing	Cures at room temperature
Reduces the formation of cracks and hair cracks in the gelcoat	Resistant to oil and diesel fuel	Bonds to different substrates	Outstanding properties when bonding different substrates
Different processing and fixing times, appropriate for all applications	Bonds to different types of substrates / materials	High strength and extremely durable	Processing and fixing time appropriate for all applications
Joint thicknesses up to 37 mm possible	Practically no pre-treatment of the surface	Proven applications	Highly UV resistant
	Easy to use		Excellent chemical resistance
	Outstanding fatigue strength		

PLEXUS high performance adhesive is suitable for a number of applications, however, we expressly point out that we cannot give any guarantee whatsoever in regard to processing or the resulting final products.

Due to the many variables of materials and surfaces, we recommend testing all substrates under the expected conditions of use before actually using to ensure correct application.

If you have any further questions concerning the PLEXUS products and how they are used, please get in contact with us.

Overview of Plexus products

Product name	MA300	MA310	MA420	MA422	MA425	MA530	MA590	MA830	MA832	MA920
Art. No.	019-1300	019-1310	019-0420	019-0422	019-0425	019-0530	019-0592	019-0830	019-0832	019-0922
Colour	Cream	Cream / Grey	Blue / Black	Blue	Blue	Grey	Grey	Grey	Grey	Blue
Mixing ratio [vol]	1:1	1:1	10:1	10:1	10:1	1:1	1:1	10:1	10:1	10:1
Viscosity [mPa·s]	A: 40.000-60.000 B: 40.000-60.000	A: 40.000-60.000 B: 40.000-60.000	A: 100.000-125.000 B: 25.000-35.000	A: 100.000-125.000 B: 40.000-60.000	A: 100.000-125.000 B: 40.000-60.000	A: 160.000-180.000 B: 175.000-210.000	A: 175.000-220.000 B: 175.000-210.000	A: 90.000-120.000 B: 25.000-35.000	A: 90.000-120.000 B: 25.000-35.000	A: 100.000-125.000 B: 25.000-35.000
Working time [min]	4-6	15-18	4-6	17-24	30-35	30-35	90-105	4-6	12-16	4-6
Fixing time [min]	12-15	30-35	15-18	35-40	80-90	90-160	210-270	20-25	50-60	15-18
Tensile strength [MPa]	20.6-24.1	20.6-24.1	12.0-15.5	10.3-12.4	10.3-12.4	13.1-15.2	9.6-12.4	15.8-19.3	18.8-19.3	10.3-13.7
Elongation [%]	15-25	5-15	100-125	75-100	120-140	130-170	130-160	30-60	30-60	80-100
Joint thickness [mm]	4	4	8	10	10	18	37	12	12	10
Description	All-purpose adhesive, high strength	Ideal for "plastics that are difficult to bond"	All-purpose adhesive with good toughness	All-purpose adhesive with medium working time	All-purpose adhesive with long working time	All-purpose adhesive, high pressure with medium working time	Marine, for bonding larger structural components	All-purpose adhesive, high strength/high toughness	All-purpose adhesive, high strength/high toughness	Versatile use, low odour

Bonding Pastes, Fillers and High Performance Adhesives



Product name	MA300	MA310	MA420	MA422	MA425	MA530	MA590	MA830	MA832	MA920
Art. No.	019-1300	019-1310	019-0420	019-0422	019-0425	019-0530	019-0592	019-0830	019-0832	019-0922
Metal										
Aluminium	✓		✓	✓	✓			✓	✓	✓
Brass										
Cast iron		✓						✓	✓	
Copper										
Ferrites										
Lacquered/coated metals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clad metals		✓	✓					✓	✓	
Sheet metal	✓	✓	✓					✓	✓	
Stainless steel	✓		✓	✓	✓			✓	✓	✓
Cold-rolled steel	✓	✓	✓					✓	✓	
Galvanised metals								✓	✓	
Plastics										
ABS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acrylates (PMMA)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polyamides		✓								
Thermoplastic polyesters (PBT, PET)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polycarbonates										
Vinyl plastics (PVC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polyurethanes	✓	✓	✓	✓	✓					
Composite materials										
Fibre glass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gelcoats	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SMC	✓	✓	✓	✓	✓					✓
Phenol resin	✓	✓	✓							
Laminates	✓	✓	✓	✓	✓	✓	✓			
RTM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Other										
Rubber		✓								

Also available PC120 Priming Lacquer – reinforces the bonding properties and durability of Plexus adhesives when aluminium and stainless steel are bonded (does not prevent the formation of rust).

BÜFA®-Bond 001

High process reliability is ensured with the ready-to-use cartridge adhesive, BÜFA®-Bond 001. Metering, mixing and application take place in just one working operation.



The cartridge adhesive BÜFA®-Bond 001 is glass fibre reinforced and easy to meter. It has outstanding chemical resistance, cures tack-free, is highly thixotropic and therefore highly stable. In addition, BÜFA®-Bond 001 contains a peroxide indicator. The maximum thickness of the adhesive layer is 8 mm.

It is mainly used for joining GRP / GRP, aluminium and steel substrates, for structural bonding and fast fixation but also for other special applications.

Application:

Art. No.: 026-0400 Hand dosing gun
Art. No.: 019-0205 Pneumatic gun

Sales unit:

Art. No.: 660-0001 BÜFA®-Bond 001
1/1 – unit/carton
This article contains:

- 6 cartridges
- 6 static mixers



Your Advantages:

- “Ready-to-use” and thus high process reliability
- Metering, mixing and application in just one working operation
- Material is quickly and selectively applied – saves material / reduces waste
- Little VOC, no half-empty, leftover containers
- Insensitive to fluctuations in temperature and humidity
- BP / amine curing concept
- Long shelf-life of 4 months (20 °C)

Accessories:

Individual: Art. No.: 029-4686 Static Mixer
12 in a package: Art. No.: 029-4763 Static Mixer



BÜFA®-Bond 001

Cartridge Solutions

Product name	BÜFA®-Bond 001	
Art. No.	660-0001 1/1	Resin base: IP: isophthalic acid OP: orthophthalic acid THP: tetrahydrophthalic acid VE: vinyl ester NPG: neopentyl glycol BPA: bisphenol A Reactivity: Measured on a 100 g sample at 20 °C Gel time: Time from 20 °C - 30 °C (mean value) = 11 min Curing time: Time from 20 °C - Tmax (mean value) = 15 min Viscosity: 600,000 mPas
Resin base	cartridge adhesive (380mL)	
Viscosity [mPa.s]	580,000	
Colour	green	
Peroxide indicator	yes (green --> white)	
Peroxide	forced mixing - resin / hardener = 10 to 1	
Pre-accelerated	BPO / amine (pre-assembled)	
Gel time [min]	10	
Curing time [min]	14	
Density [g/mL]	1.3	
Fibre reinforcement	yes	
Certification	no	
Range of use / comments	cartridge adhesive – for structural bonding and fixation	

