



BioPox ultra Clear 43,59% organic content

Highly UV resistant epoxy casting resin

BioPox ultra Clear is a transparent epoxy resin system, which is highly UV resistant and suitable for many casting applications.

Thanks to the reduced reactivity of the system, layer thicknesses of up to 5 cm can be cast in one go (material & room temperature max. 25° C).

Even at curing temperatures of 40° C 2cm layers are possible.

BioPox ultra Clear can also be used as a low-viscosity impregnation system with a very long pot life (e.g. wood consolidation). It has excellent adhesion properties on various fabrics, foams, wood and mineral materials.

Mineral fillers as well as light fillers can be added if required. Depending on the type of filler, the pot life, processing time and curing time can be extended or shortened.

Translucent to opaque coloring without affecting the surface hardness can be achieved with Epinal Color Cream UR.

Appropriate application tests for the intended casting project are recommended.

Product properties

- 💧 Transparent 2 component epoxy system
- 💧 Very long pot life, low viscosity
- 💧 Solvent-free, phenol-free, free of benzyl alcohol
- 💧 Very good wetting properties
- 💧 5cm Layer thickness per casting (at max. 24° C MT & RT) possible, 2 cm per casting up to + 40° C curing temperature
- 💧 Exothermic temperature development at 0.75 L batch quantity approx. 45° C (Ø 14 cm x 6 cm h)
- 💧 Self-degassing
- 💧 minimized curing shrinkage due to low exothermic temperature development
- 💧 good chemical resistance and mechanical properties

Application areas

- 💧 Casting in thick layers
- 💧 Infusion & vacuum processes
- 💧 Impregnate
- 💧 Laminating manually



Properties Resin / Hardener

	BioPox ultra Clear (resin)	BioPox ultra Clear (hardener)	Comment
Density [g/cm ³]	1,098 - 1,118	0,965 - 0,985	20°C
Viscosity [mPas]	450 - 950	50 - 110	25°C
Color	transparent	transparent	
Storage [°C]	+20 to +25°C		

Mixing ratio

	BioPox ultra Clear	BioPox ultra Clear	Comment
Mixing ration	100	40	by weight
	100 ml	45 ml	By volume at 20°C
Mixed viscosity [mPas]	100 - 500		25°C
The specified mixing ratio must be adhered to as precisely as possible. Deviations result in an unbalanced curing process with possibly poor results.			

Coverage

Casting resin system	approx. 1,10 - 1,15 kg / L volume
	approx. 1,10 - 1,15 kg per m ² at 1 mm layer thickness

Processing

BioPox ultra Clear			Comment
Material & object temperature	[°C]	+20 to +24	
Ambient temperature	[°C]	+20 to +24	
Subsurface temperature	[°C]	+20 to +24	
rel. humidity	[%]	< 85	
Room, material and / or object temperatures higher than 24° C can lead to the heat coloring (yellowing) and / or bubbling due to overheating during the curing process. A corresponding reduction in layer thickness per casting process is required.			

Processing

BioPox ultra Clear			comment
Pot life (batch quantity 100 g / 23°C)	[h]	> 4	Material temperature 23°C
		Larger or large batches or higher temperatures result in a considerable reduction in pot life and are to be poured immediately after mixing and a degassing phase of max. 15 minutes	
Touch dry after	[h]	~ 24 h / 50 mm layer thickness	at 23°C
Pourable upon after	[h]	~ 48 h / 50 mm layer thickness	at 23°C curing temperature
Revision window**		max. 3 days	at 23°C
mechanically workable after	[days]	4 - 5	at 23°C curing temperature
Thermally resilient up to	[°C]	~ 45°C	After curing at 25°C for 30 days
Surface hardness (Glass = 100)	[Shore D]	Casting 60 x 60 x 50 mm h	
		Soft, rubbery	nach 1 Tag / 23°C
		47 (hard rubbery)	nach 2 Tagen / 23°C
		57	nach 3 Tagen / 23°C
		66	nach 4 Tagen / 23°C
		72	nach 5 Tagen / 23°C
		81	nach 7 Tagen / 23°C
		83	nach 14 Tagen / 23°C
lower layer thicknesses and / or lower curing temperatures result in longer curing times and a slower increase in surface hardness			

The values given are average results and may vary depending on the type of processing and curing conditions.

Protect surfaces from moisture (dew, condensation), dust, etc. during the curing period.

**Longer cured surfaces have to be sanded in order to achieve optimal adhesion properties.



Storage

Store cool and dry at +20 to + 25° C. Products can be stored in the original container for 1 year. Always close the container tightly after removing the product.

The resin is sensitive to cold due to its special properties and high purity. At storage or transport temperatures below + 15° C, fogging / highly visible cloudiness up to crystallization can occur. Please check the transparency of the resin before processing.

Regeneration without loss of quality can be achieved by heat treatment. Regenerate the resin ideally at max. + 55° C over a period of 24 hours in the delivery container. Open the cap slightly to allow pressure equalization. After cooling, apply the resin as usual.

The hardener tends to form carbamate under the influence of oxygen and / or moisture. This cannot be regenerated. The hardener must be disposed of properly. Always close containers well after use.

Security alerts

Epinal epoxy resins and epinal amine hardeners are classified and labeled as hazardous substances according to the REACH, CLP / GHS regulations. Danger and safety instructions on the labels as well as the information in the safety data sheets must be observed.

Waste material & container disposal

Liquid residues and containers with residues are to be disposed of properly by the local problem disposal company (hazardous waste). Do not allow to enter ground water or bodies of water.

Emptied i.e. drip-free, the delivery containers may be disposed by the Altstoff Recycling Austria collection system (ARA license no. 21164).

Only properly cured material may be disposed of with household or commercial waste.

All information corresponds to our current level of knowledge and experience. Technical data are average values determined under normal laboratory conditions, however they do not represent an assurance of product properties and do not constitute a legal relationship. The technical data do not necessarily correlate with results that are determined on the finished part. The user is responsible for ensuring suitability regarding the intended application.

Our information does not release the user from the obligation to carry out practical application and load tests, regardless of whether mechanical or chemical, on the finished component.

Manufacturing processes and the raw materials contained are continuously adapted to the current state of the art and the legal toxicological regulations.

Compliance with national and local official requirements that may arise in connection with the processing of these products is the responsibility of the user.

In addition, our general terms of sale and delivery apply in all cases.