



POLYMÈRES
technologies

CLEARTECH 1000

ULTRA FAST-SETTING CLEAR EPOXY RESIN FAST REPAIRS – BOND - LAMINATE - COMPOSITE

Description

CLEARTECH™ 1000 is a low-viscosity, two-component epoxy resin designed for industrial and woodworking applications. It cures at room temperature and can be applied in thin layers up to 1/4 inch. As a clear coating and wood saturant, it provides superior water protection to prevent wood rot.

As a laminating resin, it serves as an excellent wetting agent for various fabric types. With a fast 13-minute pot life and full cure in 8 hours, it's ideal for bonding, repairs, and composite reinforcement in high-performance applications.

CLEARTECH™ 1000 is a 100% reactive ultra fast-setting epoxy system with very low viscosity and high ultraviolet resistance. This product is perfect for repairing voids, cracks and knots on substrates such as.

Its low viscosity and high reactivity allow to quickly fill any small repairs in a short period of time (few hours). **CLEARTECH™ 1000** can be pigmented with our pigment.

This system also meets the European RoHS standard.

CHARACTERISTICS

- High quality raw materials
- Easy mixing ratio of 2A/1B by volume
- Excellent UV resistance
- Glossy Finish
- Excellent impact resistance
- Water like viscosity to avoid bubbles
- Crystal clear transparency
- Meet the RoHS standard
- No withdrawal
- Fast handling time

APPLICATION

Before using **CLEARTECH™ 1000** make sure the surfaces are free on any contaminant (dirt, oil and grease).
SURFACE PREPARATION: Protect work area from accidental spills. Slightly rough down repair area.

Heat is generated while the epoxy mixture cures; the more epoxy and hardener that is mixed together, the more heat that is generated causing the epoxy mixture to cure faster. Only mix the amount of epoxy and hardener together that can be used within the working time.

Mix 2 parts of "A" to 1 part of "B" by volume until colour is uniform. A small variance in mixing ratio can modify physical properties.

Avoid eye and skin contact. In case of eye contact, wash thoroughly with water and consult physician immediately. In the event of skin contact, wash thoroughly with soap and water.

IMPORTANT: WE STRONGLY RECOMMEND TO VALIDATE YOUR TECHNIQUES BEFORE LAUNCHING PRODUCTION. THE SUCCESS OF YOUR ARTWORK IS BASED ON THE ABOVE-MENTIONED STEPS.

It is important to note that the pot life time will be shortened in a warmer environment and will be lengthened in a cooler environment. The handling time will reflect the temperature level. Also, the greater the amount of resin to be mixed, the shorter the pot life time will be. **We RECOMMEND TO MIX A MAXIMUM OF 150 mL at a once.**

Store **CLEARTECH™ 1000** at 22 °C with relative humidity less than 60%. A cold environment will increase the viscosity of each part A and B and a warmer environment will decrease it.

Uncured material can be easily cleaned using our green biodegradable formulation POLYCLEANER™.

Contact POLYMERES TECHNOLOGIES for more information. support@polymerestechnologies.com

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TYPICAL PROPERTIES (AT 22°C)

		PART A	PART B	MIXED
Viscosity	Brookfield (cps)	450	125	250
Consistency		Liquid	Liquid	Liquid
Density	g/cm ³	1.14	1.01	1.085
Mixing Ratio	1. By volume	2	1	1/1
	2. By weight	100	44	100/44
Color		Transparent	Transparent	Transparent
Pot life		13 minutes		
Gel Time		24 minutes		
Peak Exothermic Temperature	ASTM D 2471-71	161°C		
Full cure*		24 hours @ 22°C		

PHYSICAL PROPERTIES (solid state) 7 days after cure at 22°C

TEST	METHOD	RESULTS	
Hardness	ASTM D 785 65	Shore D	82
Compressive strength	ASTM D 695 80	MPa [†] % max. strain	86.24 3.88%
Tensile strength	ASTM D 638 TYPE 1	MPa	44.7
Flexural strength	ASTM D 790A	MPa	119
Elongation	ASTM D-790A	Mpa	2.9%
Deflection Temperature (°C)		1. 455 kPa [†] 2. 1820 kPa	59 °C 56 °C
Impact resistance	ASTM D 256 81	J/m [†]	4.9
Linear shrinkage	ASTM D 2566 79	cm/cm	0.0014
Abrasion resistance	TABER CS 17-1000 GR		0.054
Coefficient of linear thermal expansion	ASTM D 696 79		4.33 x 10 ⁻⁵

PRECAUTIONS

- Consult Material Safety Data Sheet prior to use.
- Normal health and safety precautions should be observed when handling these products.
- Ensure good ventilation.
- Wear gloves safety glasses and protective clothing.
- Once the container is opened **POLYMÈRES** has no control or responsibility for the shelf life.

* After material has solidified the curing process can be accelerated at 52°C (125°F).

† MPa = 145 lb

† kPa = .145 psi

† 53.4 J/m = 1 blF/inch



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- Shelf life of product in original closed containers is **one (1) year**.
- It is recommended to follow Provincial and Federal safety regulations. In case of eye contact, rinse well with water, in case of skin contact, rinse with soap and water. Keep away from children. **KEEP OUT OF REACH OF CHILDREN. For industrial use only.**

GARANTEE

Having no control over the use and application of this product, the manufacturer and / or the distributor cannot guarantee the result obtained. The warranty is therefore limited to the replacement of a product that the user has demonstrated to the satisfaction of the manufacturer and distributor that it is actually defective. Before using this product, the user must ensure that the product is suitable for its intended use. Only the user assumes the risks related to this use. The user must ensure that this product meets his needs by conducting tests in the short, medium and long term to validate the results and in the conditions of use and according to the instructions provided. This limited warranty excludes all liability for consequential, incidental or special damages. Except as described above, the user expressly acknowledges and accepts at the time of the purchase of this product that the manufacturer and / or distributor disclaims any other liability and any other express or implied warranty of quality and an implied warranty of quality of the material are expressly excluded.