CHILL DIAMOND- FAST
TRANSPARENT EPOXY RESIN

DESCRIPTION

CHILL DIAMOND is an epoxy system with 100% reactive materials with a very low viscosity and high resistance to ultraviolet . CHILL DIAMOND - FAST is ideal to fill small cracks, voids and knots. It can also be use to cast small transparent objects or colored jewels such as earrings, necklaces, bracelets, hairpins, cufflinks and others.

Its pot life allows a fast handling time, less than 12 hours. His very low viscosity allows a maximum infiltration of the interstices in the moulds or the different substrates on which CHILL DIAMOND is poured.

This system also meets the European RoHS standard.

CARACTERISTICS

- High quality raw materials
- Easy mixing ration of 2A/1B by volume
- Excellent UV resistance
- Glossy Finish
- Excellent impact resistance
- Very low viscosity
- Crystal clear transparency
- Meet the RoHS standard
- No withdrawal
- 100% solid, without VOC

APPLICATION

Store **CHILL DIAMOND** on a pallet (do not store directly on the floor) or shelf @ 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.

Before using **CHILL DIAMOND**, be sure to mix each Part A and B. Minimize air formation as much as possible by gently mixing for a minimum of 5 to 10 minutes with a metal spatula.

Mix exactly **2 parts of A** with **1 part of B** by volume (or **100 A / 42 B** by **weight**) and make sure to mix evenly, making sure to scrape the edges and the bottom of your container.

Since the pot life of the system is 24 minutes @ 22 ° C for a mass of 200 grams, be sure not to mix more material that can be applied within the life time pot. 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 resins to be mixed, the shorter the pot life time will be.

Uncured material can be easily cleaned using isopropyl alcohol or **T-901 solvent.**

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

TYPICAL PROPERTIES (AT 22°C)

		PART A	PART B	MIXED
Viscosity	Brookfield (cps)	675	40	185
Consistency		Liquid	Liquid	Liquid
Density	g/cm^3	1.125	0.948	1.078
Mixing Ratio	1. By volume	2	1	2/1
	2. By weight	100	42	100/42
Color		Transparent	Transparent	Transparent
Pot life		24 minutes		
Gel Time		75 minutes		
Peak Exothermic Temperature	ASTM D 2471-71	168°C		
Full cure*		2-3 days @ 22°C depending on the design and the volume if the piece.		

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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	91.05 4.4%
Tensile strength	ASTM D 638 TYPE 1	MPa	48
Flexural strength	ASTM D 790A	MPa	121
Elongation	ASTM D-790A	Mpa	4.3%
Deflection Temperature (°C)		1. 455 kPa† 2. 1820 kPa	52 °C 54 °C
Impact resistance	ASTM D 256 81	J/m‡	75
Linear shrinkage	ASTM D 2566 79	cm/cm	0.00024
Abrasion resistance	TABER CS 17-1000 GR		0.072
Coefficient of linear thermal	ASTM D 696 79		4.426 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.
- 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.

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.

* 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