



FATHOM DEEP POUR EPOXY

- Deep pour epoxy — Pour single layers up to 3" deep
- Scratch & stain resistant, low VOC, low odor
- Crystal Clear, UV resistant epoxy can be colored or tinted

TotalBoat Fathom deep pour epoxy lets you apply deeper single layers than any other epoxy kits. This clear casting resin is ideal for deep casting and molding applications, river tables, sculptures, live edge tables, slab pours, and more. Fathom allows layers of resin up to 3" deep for casting applications, and up to 2" deep for river tables and slab pours. This crystal-clear epoxy can be tinted with compatible mica powder, alcohol inks, universal tints and pigment paste dispersions. Simple 2:1 mix ratio by volume. Cured surface is BPA-free & safer for surfaces that come into contact with food.

CLEANER/SURFACE PREPARATION: Denatured alcohol, acetone (depending on substrate compatibility)

CLEANUP: Scrape up and remove any uncured material, as needed. Denatured alcohol, lacquer thinner, or acetone may be used to clean up uncured epoxy. Cured epoxy must be removed mechanically.

THINNER/REDUCER: DO NOT thin TotalBoat Fathom.

COLORANTS/TINTS: Epoxy dyes, colorants, or special effects additives can be added and mixed in. Only use products designed for use with epoxy. **IMPORTANT:** Always perform a small test with Fathom and any colorants, dyes or other special effects to ensure that it achieves the desired results.

MOLD RELEASE AGENTS: Mold release paste wax, or an appropriate aerosol mold release agent

SAFETY AND PERSONAL PROTECTIVE EQUIPMENT:

Always use proper safety equipment, clothing, and PPE in accordance with the Safety Data Sheet. Only dispense or apply Fathom with adequate ventilation.

EXOTHERMIC REACTION!

The cure of TotalBoat Fathom is an exothermic reaction and will generate heat. It is not uncommon for a mass of Fathom epoxy to reach 200-300°F or hotter if it is poured thicker than advised in these instructions.

SURFACE PREPARATION:

- Clean any molds or dammed areas thoroughly to remove any dust, oil, tree sap, or other contaminants that can affect the final product.
- Clean the surface with a clean, lint-free cotton rag dampened with denatured alcohol.
- Thoroughly check dams or molds for possible leaks, and use silicone caulk in corners to prevent leakage, as TotalBoat Fathom has a very low viscosity. Use sheathing tape, Tyvek® tape, or release agent on the inside of the mold to prevent the epoxy from adhering to the dam/mold.
- Take extra care to seal or apply silicone caulk to the corners of molds to prevent leakage.
- When making larger pours, ensure that the structure that the epoxy is poured into is well supported to prevent sagging from the weight of the epoxy, and ensure that the surface is level.
- When a rigid mold is being used, apply a release agent or mold release wax, as directed. When using a mold release wax, applying 4-5 coats, as directed, will ensure the best results when demolding.

IMPORTANT!

- When applying to wood or porous surfaces, always make sure to apply a very thin skim coat of epoxy to seal the surface, and allow it to cure before applying more epoxy.
- This skim coat will prevent air bubbles from coming out of the wood and getting suspended in the epoxy.
- **NOTE:** TotalBoat Fathom cures too slowly to be used for this purpose. An epoxy such as TotalBoat High Performance Epoxy is optimal for sealing porous substrates. Allow it to cure until firm before applying Fathom.

APPLICATION CONDITIONS:

- The application temp of Fathom is 60-80°F. The product, substrate, and ambient air should all be within this range.
- The optimal temperature for thicker pours (smaller castings up to 3", or larger slab pours up to 2" is 70°F.
- The epoxy will cure faster in warmer conditions and will cure slower under cooler conditions.
- The reaction between the resin and the hardener will create a delayed exothermic reaction, waiting between 6-20 hours after it has been mixed before it develops noticeable heat.
- The thicker the pour, the more heat the reaction creates.
- The epoxy will increase in temperature as well as viscosity as the cure is occurring.
- Not respecting the maximum pour depth or applying Fathom under warmer conditions may lead to excessive



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shrinkage in corners, cracks, or yellowing if it becomes too hot during the cure.

- If possible, the use of cooling tables under the mold, or cooling the ambient temperature of the space as the epoxy rises over 100°F will help slow the epoxy's temperature increase.
- Even and consistent temperature control will also promote the best surface finish of the epoxy.
- Take extra care not to blow dust or waves into the epoxy surface with fans or air conditioning.
- For best results, the epoxy should reach at least 90-120°F, but not exceed 180-200°F.

MIXING:

- For best results, the minimum pour volume should be ½-gallon of mixed epoxy. Mix 2 parts RESIN – PART A with 1 part HARDENER – PART B by volume (2A:1B) (or 100 parts RESIN – PART A to 44 parts HARDENER – PART B when measuring by weight).
- Do not adjust the mix ratios because doing so will negatively affect the cure and final product.
- A drill mixer may be used with this product to help mix larger volumes. Thoroughly mix both components in one mixing pail for 2-3 minutes, scraping the bottom and the sides thoroughly to ensure proper mixing, then pour into a second pail and mix for another 2-3 minutes to prevent swirls or resin- or hardener-rich areas of epoxy.
- Epoxy-compatible dyes, colorants, or special effects additives can be added and mixed in, as desired.
- Allow the mixed epoxy to sit in the mixing pail for 20-30 minutes prior pouring to allow any air bubbles to float to the surface.

APPLICATION:

RIVER TABLES and SLAB POURS: When pouring for larger projects, such as slabs or tables, do not exceed a pour depth of 2" to prevent yellowing, shrinkage, or cracking. Step pouring with multiple layers will achieve the best results when the desired thickness is greater than 2".

CASTING: When casting TotalBoat Fathom in a smaller mold (up to 1 mixed gallon of Fathom as an absolute maximum), the epoxy can be poured up to 3" deep. For best results, do not use Fathom for pours less than 1" in depth as it will extend the required cure time.

BUBBLES:

- Suspended bubbles can be alleviated by Slowly waving a heat gun a few inches over the surface of the recently poured Fathom. Only use heat gun for a few seconds at a

time, do not singe the epoxy. This can help improve the consistency and smoothness of the surface.

- For thinner pours up to 1.5" thick, the ambient temperature can be increased to 90°F after 20 hours to help speed up the cure, allowing the epoxy to fully harden.

POURING ADDITIONAL LAYERS OF THICKSET FATHOM:

- When pouring multiple layers of Fathom, it is very important to wait until the previous layer has cooled sufficiently, to prevent yellowing, surface distortion, or other negative consequences of excessive heat from the cure.
- Conservatively, the safest interval is to wait a minimum of 36 hours for Fathom to cure prior to applying more, regardless of pour depth and ambient temperature.
- For applications it is important to build layers as quick as possible, wait at least 24 hours, and use an infrared thermometer to measure the temperature at the center of the epoxy mass, where the highest temperature will be recorded.
- The previous layer should be below 85°F, and firm enough that it will not distort when more epoxy is poured over it.
- Always follow the maximum pour depth based upon the volume of Fathom.

DEMOLDING:

- The minimum demold time for deeper or larger pours is 48 hours, and 72 hours for smaller pours.
- If the epoxy feels soft or rubbery at all, it is extremely important not to demold yet.
- Support any demolded slabs by keeping them on a flat, stable surface, and support any demolded castings for up to 5 days to prevent permanent sagging.



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APPLICATION DATA:

Components:	Two - Resin and Hardener
Mix Ratio:	2:1 (Resin:Hardener) by Volume 100:44 (Resin:Hardener) by Weight
Application Conditions:	60-80°F (0-80% Relative Humidity)
Coverage:	231 cubic inches per gallon of mixed Fathom
Resin Density:	9.22 @ 25°C
Hardener Density:	8.2 @ 25°C
Resin Viscosity:	600-800cP @ 25°C
Hardener Viscosity:	120cP @ 25°C
Initial Mixed Viscosity:	450cP @ 25°C
Working Time:	4-6 hours (depending on the mass of mixed epoxy)
Full Cure Time:	5-7 days (depending on the mass of mixed epoxy)
Resin Color:	Clear
Hardener Color:	Clear
Units:	1.5 Gallon Kit 3 Gallon Kit 6 Gallon Kit
Shelf Life:	Minimum of 1 year after date of manufacture (if stored properly)

PHYSICAL DATA:

Cured Color:	Clear
Cured Density:	1.11 g/cm ³
Hardness:	82 Shore D
UV Stable:	Yes
Volumetric Shrinkage:	4.7%
Volumetric Yield:	24.9in ³ per pound (.75 sq ft (at 3" thickness) per gallon of mixed product)
HDT:	115°F Room Temperature (121°F)
Compressive Strength:	Post Cured)
Izod Impact:	8300 psi .80 ft-lb/in (notched)
Tensile Strength:	6800 psi
Tensile Elongation:	6.7%
Flexural Strength:	9600 psi
Flexural Modulus:	321,000 psi