



TOTALBOAT THICKSET

- For thick casting, encapsulating, and molding applications
- Self-leveling, high-gloss finish
- Extra-long working time
- Non-yellowing, low VOCs, low odor

TotalBoat ThickSet is an easy-to-use, pourable 2-part crystal clear epoxy resin system that produces brilliant 3D effects for thick casting, molding, and encapsulating applications. Its low viscosity, reduced exotherm, and extremely long working time minimize trapped bubbles and reduce heat, allowing you to pour single resin layers up to 1" thick (2" when casting in small molds). TotalBoat ThickSet can be tinted with epoxy coloring agents, and cured epoxy is non-yellowing. This versatile low-odor, low-VOC epoxy is ideal for a variety of creative projects, including sculptures, wall art, tabletops with embedded objects, figurines, stage props, and much more. Be creative, experiment, and have fun! Not designed for continuous UV exposure. Do not place items hotter than 125°F on cured surfaces.

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 ThickSet.

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 ThickSet 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 for each product.

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

SURFACE PREPARATION:

Wood and Other Porous Materials: 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.

- ThickSet epoxy will not be desirable to use for the skim/seal coat as the cure rate is far too long when it is applied in a thin film.
- TotalBoat High Performance Epoxy or TotalBoat Penetrating Epoxy are the recommended products to seal wood or other porous materials.

This skim coat will prevent air bubbles from coming out of the wood and getting suspended in the epoxy. Once the skim coat of epoxy has cured, the porous



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material can be embedded in ThickSet epoxy.

Molds: 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. TotalBoat ThickSet has a very low viscosity and an extended gel time. Any leakage could potentially lead to a big mess.
- Use sheathing tape, Tyvek® tape, or release agent on the inside of the mold to prevent the epoxy from adhering to the dam/mold. 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.
- If the surface is not sealed prior to pouring, moisture will produce foam and bubbles, producing poor results. DO NOT pour TotalBoat ThickSet on unsealed wood or porous surfaces.

MIXING:

- Do not mix more than one gallon of material at a time to ensure the epoxy is mixed properly, and to ensure proper working time. Of more epoxy is required, more batches can be mixed.
- Into a clean, dry, plastic mixing pot, measure 3 parts RESIN - PART A with 1 part HARDENER - PART B, by volume (3A:1B), or 100 parts RESIN - PART A to 28 parts HARDENER - PART B, by weight. Do not adjust the mix ratios because doing so will negatively affect the cure and final results.

- Thoroughly mix both components in one mixing pot for 2-3 minutes, scraping the bottom and the sides to ensure proper mixing, then pour into a second mixing pot and mix thoroughly for another 2-3 minutes. Ensure that the two components are blended until there are no striations of unmixed epoxy visible anywhere.
- Epoxy dyes, colorants, or special effects additives can be added to ThickSet once the resin and hardener components have been mixed together. It is safe to add tints and colorants through the duration of the Working Time. Once the epoxy warms up to 85-90°F, do not add or mix any dyes, tints, or colorants, as doing so may leave a permanent distortion in the surface of the epoxy.
- Pot Life: Once the two components are dispensed into the initial mixing pot, complete the mixing and then the addition of any tints/ colorants within 10-15 minutes, and pour into the desired mold. It is very important to ensure proper working time of the product.
- Working time: The working time of Total-Boat ThickSet is 45-60 minutes, depending on the depth it was poured and the ambient temperature. Final colorants or tints can be added within this time, or objects can be embedded.

APPLICATION:

IMPORTANT: Environmental conditions are extremely important to the quality of the cure, and to achieving the best clarity and surface finish. Depending on the overall mass of epoxy being poured at a single time, the depth that it is poured, and the ambient temperature, excessive heat may build up from the reaction, causing potential yellowing, cracks, or



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other shrinkage. Helping to dissipate the heat may help promote the best results. Do not mix or pour ThickSet when the temperature or relative humidity is outside of the acceptable range.

- For the epoxy to cure fully, the ambient temperature must be between 65°F and 80°F, and the relative humidity should be less than 60%, to promote the best finish.
- When making slab pours, river tables, live edge pours, or pours that involve a large surface area, ThickSet epoxy can be poured up to 1" in depth. For pours up to 1", it is strongly encouraged to ensure good heat dissipation all around the poured epoxy, or the ability to control the ambient temperature once the poured epoxy begins to warm up.
- If good heat dissipation is not an option, it is recommended to only pour ThickSet up to depths of 1/2" to ensure the best cure and finish, especially with larger pours.
- Without good heat dissipation, deeper pours of ThickSet may take a yellow cast, have a wavy or rough surface texture, or even have cracks from shrinkage due to an excessive exothermic reaction.

Step pouring: Step pouring with multiple layers will achieve the best results. When the previous layer has cooled, but is soft enough to indent with a fingernail, pour the next layer directly on top. If the epoxy has cured beyond that, lightly scuff the surface with a Scotch-Brite™ pad, remove any sanding residue, and apply the next layer.

Casting: When casting TotalBoat ThickSet in a smaller mold, the epoxy can be poured in layers 1"-2" deep, using the same method. The maximum volume of ThickSet that should be cast to the maximum 2" depth is 11 ounces. For castings using 11-20 ounces

of mixed ThickSet, the maximum pour depth should be 1.5". Castings using 20 ounces or more should only be poured to a maximum depth of 1" at a time to achieve the best clarity and surface finish.

CURE TIMES:

Pot Life: 10-15 minutes @ 77°F

Working Time: 45-60 minutes @ 77°F

Tack-Free Time: (.5"- 1" slab pours or 1.5-2" castings @ 77°F): 4-8 hours

Sandable: 12-24 hours @ 77°F

Full Cure: 5-7 days @ 77°F

PRODUCT STORAGE:

- Store at 60-90°F, in a dry place.
 - Ensure that containers are thoroughly sealed directly after use.
 - Store products on a raised surface off the floor during cold weather, and avoid storing near outside walls or doors.
 - Epoxy resins that are contaminated with dust or moisture, or are subjected to low temperatures, may crystallize.
 - Do not use material that has any sign of crystallization, until it has been liquefied.
 - A CRYSTALLIZED RESIN OR HARDENER CAN BE EASILY RETURNED TO ITS ORIGINAL STATE BY HEATING THE MATERIAL TO 140°F-150°F AND STIRRING UNTIL THE MATERIAL RETURNS TO THE LIQUID STATE.
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PRODUCT SAFETY AND HANDLING:

- Work in well-ventilated areas.
- Wear gloves, eye protection, and clothing protection.
- Avoid contact to the skin and eyes. Avoid clothing contamination.

- Wash hands thoroughly after handling.
- These products may cause skin and respiratory allergic reactions.
- Consult Safety Data Sheets (SDS) for complete health and safety information.

APPLICATION DATA:	
Application Temperature/ Relative Humidity:	65°F to 80°F, 0-60% RH
Mix Ratio by Volume:	3A:1B
Mix Ratio by Weight:	100A:28B
Resin Density @ 77°F:	9.3 lbs/gal
Hardener Density @ 77°F:	7.9 lbs/gal
Resin Viscosity @77°F:	1000 cP
Hardener Viscosity @ 77°F:	10 cP
Mixed Viscosity @ 77°F:	260 cP
Pot Life @ 77°F:	10-15 minutes**
Working Time @ 77°F:	45-60 minutes***
Gel Time @ 77°F (150g mass):	5.5 hours
Sandable Time:	12-24 hours
Full Cure Time:	5-7 days
Shelf Life:	At least one year after DOM, if stored properly

**Dependent on mixing mass, material temperature, ambient temperature, mixing time, speed of mixing. Once ThickSet epoxy is mixed, pour into the desired mold as soon as possible to promote the longest working time possible.

*** The working time is dependent on the mass of mixed epoxy, and ambient temperature. Pouring ThickSet thicker than specified will shorten the working time. Keeping the mixed epoxy in the mixing pot longer than required prior to pouring it into the mold can shorten the working time dramatically.

PHYSICAL DATA:	
Color:	Clear
Izod Impact:	.84 ft-lb/in
Tensile Strength:	8,100 psi
Tensile Elongation:	4.3%
HDT (Room Temperature Cure):	118°F
HDT (Post Cure):	122°F
Compressive Strength:	11,260 psi
Flexural Strength:	13,480 psi
Flexural Modulus:	438,423 psi
Cured Density:	1.15g/cm ³ (.04 lbs/in ³)
Volumetric Yield:	25.0 in ³ /lb, or 1.5 sq ft (at 1" thickness) per gallon of mixed product
Volumetric Shrinkage:	3.85%
Hardness, Shore D:	82