THIXO FAST CURE

- Two-part thixotropic epoxy adhesive
- Sandable and ready to accept high loads in only four hours
- Very high bond strength to a number of substrates
- Each cartridge comes with two static mixing tips
- Can be used above or below the waterline
- Comes in a 185ml cartridge that fits most standard caulk guns

Thixo Fast Cure high-strength, two-part, fast-curing epoxy adhesive is both stronger and cures over three times faster than standard Thixo. Ideal for bonding applications & ready for high loads in only four hours. Included mixing tips ensure the perfect resin to hardener ratio. 185ml cartridge fits most standard caulk guns.

CLEANER/SURFACE PREPARATION: Acetone, denatured alcohol, TotalBoat Eco Solvent

CLEANUP: Denatured alcohol or acetone. Once cured, it must be removed mechanically.

THINNER/REDUCER: Do not thin Thixo Fast Cure.

MOLD RELEASE AGENTS: Mold release paste wax, aerosol mold release agents.

PRIMER: No primers are necessary; etching with TotalBoat Aluminum Boat Etch Wash is highly recommended on bare aluminum substrates, and TotalBoat Rust Primer is recommended on ferrous steel applications.

APPLICATIONS: Bonding, structural epoxy adhesive, filleting, small gap filling, gluing

ACCEPTABLE SUBSTRATES: Fiberglass, wood, properly prepared metals, block, brick, concrete, glass, slate, tile, stone

CAULK GUN (REQUIRED FOR USE): 185ml Thixo Fast Cure cartridges fit most standard caulk guns that allow for an offset nozzle. Guns that only have a small, centered hole for the nozzle will not work. An 8:1 mechanical advantage, or higher, is strongly recommended.

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 Thixo Fast Cure is an exothermic reaction and will generate heat. Though Thixo Fast Cure is generally applied in thin films or smaller applications, it is not uncommon for larger mixed masses to reach 200°F or higher during the cure cycle.

SURFACE PREPARATION:

All surfaces need to be free of any potential contaminants. Surface contamination will reduce or compromise Thixo Fast Cure's bond strength to any substrate. If any surfaces are to be sanded before applying Thixo Fast Cure, always remove all surface contaminants prior to sanding or abrading the surface. Contaminants can include dust, dirt, grease, moisture/ water, oil, or wax.

- **IMPORTANT!** Only use clean cotton rags for surface preparation. Synthetic rags can leave a film of contamination if they come in contact with some solvents.

FIBERGLASS:

- Fiberglass substrates may have wax or amine blush on the surface, depending on the resin system they're made with, and application methods.
- Any amine blush needs to be removed with fresh, warm water and a mild soap.
- Dry the surface completely. Any waxes need to be completely removed with a dewaxing product.
- After the surface has been cleaned of all potential surface contamination, grind the surface or abrade it with 80-grit (or coarser) sandpaper and remove all sanding residue. Then wipe with a clean cotton rag dampened with one of the specified surface preparation solvents. This will provide a rough surface for Thixo Fast Cure to achieve the best mechanical bond.
- Allow the surface to dry completely before applying Thixo Fast Cure.

EPOXY:

- The cure of epoxy materials can create an amine blush on the surface of the cured material, even if the epoxy being used is considered 'non-blushing'.
- Remove any potential amine blush by washing the surface with fresh, warm water and a mild soap. Dry the surface completely.
- Wipe the surface with a clean, dry cotton rag dampened with one of the specified surface preparation solvents.
- After the surface has been cleaned of all potential surface contamination, grind the surface, or abrade it with 80-grit (or coarser) sandpaper and remove all sanding residue. Then wipe with a clean cotton rag dampened with one of the specified surface preparation solvents. This will provide a rough surface for Thixo Fast Cure to achieve the best mechanical bond.
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WOOD:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Oily hardwoods and white oak should be wiped with acetone, if possible, during the surface preparation steps.
- Allow any solvents to evaporate completely.
- Abrade the area of the wood that is to be bonded with 80-grit (or coarser) sandpaper.
  - Remove all sanding residue and wipe the surface clean using one of the specified solvent wipes.
  - Allow the surface to dry completely before applying Thixo Fast Cure.

METALS:

Steel/Iron:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough. Remove all sanding residue and wipe the surface again with a clean cotton rag dampened with the surface preparation solvent.
- Applying TotalBoat Rust Primer, as directed, is recommended, but not required. This will help to prevent further development of rust and optimize the bond.
- Allow the surface to dry completely before applying Thixo Fast Cure.

Stainless Steel:

- Remove all surface contamination by wiping the surface with a clean cotton rag dampened with one of the surface preparation solvents. Allow the surface to dry completely.
- Grinding or sanding (with 80-grit or coarser sandpaper) the surface to be bonded with Thixo Fast Cure can help maximize the bond strength. If the surface is abraded, remove all sanding residue and wipe the surface with a clean cotton rag dampened with the surface preparation solvent.
- Allow the surface to dry completely before applying Thixo Fast Cure.

Aluminum:

- Remove all surface contamination by wiping the surface with a clean cotton rag dampened with one of the surface preparation solvents. Allow the surface to dry completely.
- The aluminum surface should either be abraded with 80-grit sandpaper or a grinder immediately before bonding, or etched with TotalBoat Aluminum Boat Etch Wash, as directed.
- If the surface is abraded, remove all sanding residue and wipe the surface clean with one of the specified solvent wipes, then allow to dry before bonding.
- If the surface is to be etched, ensure that the surface has dried completely before applying Thixo Fast Cure.
- Apply Thixo Fast Cure within 1 hour of the surface preparation.

Lead: **SAFETY ALERT! Always take extreme care and use the required Personal Protective Equipment when working with lead.**

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough.
- Work quickly and only do a small area at a time because lead oxidizes very quickly and will turn dull in just minutes, leaving a poor surface for bonding. Remove any sanding residue and wipe the surface clean again with the surface prep solvent.
- Allow the solvent to evaporate and apply Thixo Fast Cure immediately. If Thixo Fast Cure is not applied within a few minutes, repeat the surface preparation.

Other Metals:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents.
- Grind or sand the surface with 80-grit or coarser sandpaper, leaving it shiny and rough. Remove all sanding residue and wipe the surface again with a clean cotton rag dampened with the surface preparation solvent.
- Allow the surface to dry completely.
- Within 1 hour, apply Thixo Fast Cure to the prepared surface.

STONE:

- Stone materials should always be dry and free of any dirt, dust, or other residue.
- Do not attempt to bond stone that has recently been submerged in water for a long duration, if possible.
- Clean the stone by wiping with one of the appropriate surface prep solvents.
- Allow the stone to dry completely before applying Thixo Fast Cure.

MASONRY:

- Masonry can be bonded with Thixo Fast Cure, but for best results, it is extremely important to ensure that the masonry has been left to dry for an extended period of time before applying Thixo Fast Cure.
- Masonry can trap a lot of moisture, which can compromise the bond of Thixo Fast Cure during periods of dramatic pressure change, or enduring freezing-to-hot temperatures.
- Clean the surface of any dust, debris, or loose material.

- Sand or abrade the surface where the masonry is to be bonded. Remove any sanding residue and wipe with one of the recommended surface preparation solvents.
- Allow the solvents to evaporate completely and apply Thixo Fast Cure.

CONCRETE:

- Remove any loose dust or debris from the surface that is to be bonded, as well as any other surface contamination.
- Do not attempt to bond new concrete, or concrete that is sweating or emitting a lot of moisture.
- Sandblasting, or otherwise abrading the surface where it is to be bonded, will help provide a great base for a mechanical bond.
- Etching the concrete with a concrete etch material (as directed) will also prepare the surface to accept the epoxy, helping to generate a very strong bond.
- If the surface was etched, ensure that the surface is completely dry before applying Thixo Fast Cure.

GLASS:

- Remove all surface contamination by wiping the surface with a rag dampened with one of the surface preparation solvents – denatured alcohol is preferred for glass surfaces.
- Allow the surface to dry completely before applying Thixo Fast Cure.

APPLICATIONS:

Bonding: Thixo Fast Cure's strength, thixotropic properties, and shorter working time make it a dynamic adhesive for many bonding applications, for a wide variety of substrates. Thixo Fast Cure is safe to use below the waterline, or for structural applications, when the cured physical properties of Thixo Fast Cure are adequate.

Filleting: When using Thixo Fast cure to bond two items that are perpendicular, or at an angle, apply the epoxy between the two items that are to be bonded. Then when they are set in position, run an additional continuous bead of Thixo Fast Cure, roughly 1/8"-1/4" thick in the corner of the joint. A rounded tool, such as a wooden tongue depressor, can be run along this bead to evenly spread the Thixo Fast Cure with the rounded profile, making it uniform and aesthetically clean looking. This fillet adds extra rigidity and stability by increasing the surface area of the bond.

Gap Filling: Thixo Fast Cure is not advised for most gap filling applications, but the largest gap that can be filled is up to ½" in thickness. Regular Thixo or Thixo Pro are the preferred Thixo products for gap filling.

DISPENSING & MIXING:

Application Conditions: Thixo Fast Cure should only be dispensed when the ambient temperature, temperature of the epoxy itself, and the temperature of the substrate being bonded are above 55°F, and the relative humidity does not exceed 90% for the first 24 hours of the cure process. Curing Thixo Fast Cure outside of these conditions may dramatically slow the rate of cure, or compromise some physical properties of the cured material. In cooler ambient conditions, it is recommended to warm the cartridge to 70-80°F before use, for ease of dispensing and better workability.

Caulk Gun:

Use an appropriate caulk gun to dispense Thixo products. For ease of application, ensure that the caulk gun meets the minimum recommended mechanical advantage.

Mix Ratio:

The mix ratio of Thixo Fast Cure is 2:1 (resin:hardener). Thixo Fast Cure cartridges are constructed with the internal mechanics to automatically dispense at the rate of 2 parts resin, for every 1 part of hardener.

Static Mixing Tips:

- Thixo Fast Cure can be dispensed with or without the static mixing tip threaded on the cartridge. The static mixing tips blend the two components as they come out of the cartridge, ensuring that the bead of epoxy that is dispensed from the tip is completely mixed and ready for use.
- The tip of the static mixing tip can be trimmed to the desired diameter.
- Unscrew the threaded cap, remove the plug from the cartridge, and thread on a new static mixing tip.
- Dispense 3-4" of bead as WASTE MATERIAL. DO NOT use the first few inches, as it may be resin or hardener rich.
- After use, do not attempt to clean or reuse static mixing tips.
- Allow the epoxy to cure in the tip, on the cartridge. Simply replace the static mixing tip when the cartridge is used the next time.

Dispensing Without a Static Mixing Tip:

- Remove the threaded cap.
- It is strongly advised to use a marker or some other method to indicate the orientation of the plug if it is to be put back on the cartridge later.
- Ensure that the epoxy is mixed thoroughly, until it has an even color and texture.

Curing:

Cure rates are dictated by the ambient temperature, the temperature of the substrate, and the mass of epoxy that was applied. The gel time of Thixo Fast Cure in a thin bead or film is roughly 30 minutes at 77°F, and can be sanded or used for medium- to high-load applications within 4 hours @ 77°F. Full

cure is roughly 2-5 days. Warmer conditions will shorten these cure times, while cooler conditions will extend them.

Clamping:

The recommended clamp time for Thixo Fast Cure is 24 hours, to ensure best results. The natural tendency is to clamp with a lot of pressure, but this method squeezes all of the epoxy out of the glue joint, making the joint weak. Take extra care not to over-clamp items, and ensure that there is an even, thin film of epoxy between all items being bonded.

PRODUCT STORAGE:

- Store Thixo Fast Cure between 60-90°F, sealed tightly, in a dry place, before and after use.
- Do not store Thixo Fast Cure on the floor, or near windows/doors that may expose the Thixo Fast Cure cartridge to cooler conditions.
- Storing Thixo Fast Cure under cooler conditions or exposing the epoxy in the cartridge to dust and humidity can increase the risk of crystallization.
- If the original plug for the cartridge is to be put back on the cartridge after use, take extreme care not to put the resin plug on the hardener side, or vice versa. Marking the plug before removing it the first time can help prevent this.
- For applications where a static mixing tip is used, leave the static mixing tip on the cartridge after use, and allow the epoxy to cure in the tip. The epoxy will not adhere the mixing tip to the cartridge. The cured epoxy in the mixing tip will form a seal, protecting the epoxy inside the cartridge. It is not viable to try and clean out static mixing tips after use. When the product is used next, simply unscrew the static mixing tip that was on the cartridge, and install a new, unused one.

CRYSTALLIZED EPOXY:

- Crystallization can occur in the liquid resin or hardener components of epoxy, and can present itself as a gritty texture, cloudiness, or as being much thicker in consistency than it should be.
- Epoxy that has crystallized should not be used until the crystallization has been resolved.
- Warming the liquid epoxy to 125-150°F will rectify the crystallization in the epoxy, turning it back to the consistency it is supposed to have, and making it ready to use again.
- The most common way to warm a Thixo Fast Cure cartridge is to insert the cartridge into a sealable plastic bag, and place it into a bowl or basin of warm water (not boiling). Change out the water, as needed. This may take 30-90 minutes, until all contents of the cartridge are at least 125°F.
- Following proper storage conditions is the best way to prevent crystallization.

APPLICATION DATA:	
Application / Epoxy Type:	Adhesive, bonding, sealing, filling
Application Film Thickness:	Thin film up to 1/2"
Application Temperature/RH:	Minimum of 55°F, 0-90% Relative Humidity
Working Time	20-45 minutes @ 77°F (thin film/bead)
Gel Time:	30 minutes, thin film @ 77°F 10 minutes, 150g mass @ 77°F (ASTM 2471)
Minimum Clamp Time:	4 hours @ 77°F
Minimum Cure for Light Use:	4 hours @ 77°F
Full Cure Time:	2-5 Days
Resin Density:	9.6 lbs./gallon @ 77°F
Hardener Density:	8.6 lbs./gallon @ 77°F
Mix Ratio (by Weight):	100A:46B (Calculated)
Mix Ratio (by Volume):	2A:1B (Calculated)
Sag Resistance:	1/2" (Vertical Surface)
Mixed Viscosity:	Thixotropic (ASTM 2196)
Shelf Life:	At least 1 year (under proper storage conditions)

PHYSICAL DATA:	
Cured Color/Finish:	Off-White to Buff
Components:	Two – Resin (Part A), Hardener (Part B)
Units:	185ml cartridge
UV Stable:	No
Tensile Strength:	8,500 psi (ASTM D638)
Tensile Modulus:	372,000 psi (ASTM D638)
Tensile Elongation:	7.4% (ASTM D638)
HDT (Post Cure):	133°F (ASTM D648)
Compressive Strength:	9,600 psi (ASTM D695)
Flexural Strength:	13,200 psi (ASTM D792)
Flexural Modulus:	393,000 psi (ASTM D790)
Volumetric Yield/Coverage:	Roughly 59' of bead @ 1/8", or 175 sq. in. spread @ 1/16" thickness (not accounting for waste) per 185ml cartridge
Volumetric Shrinkage:	3.85% (ASTM D792/D1475)
Tensile Adhesion (Wood):	1,380 psi (ASTM 4541)
Tensile Adhesion (Aluminum):	1,890 psi (ASTM 4541)
Tensile Adhesion (G-10 Plate):	2,030 psi (ASTM 4541)
Hardness:	82 Shore D (ASTM D2240)