Rhino Linings Recommendations for Lining Ice Baths with TUFF STUFF or Rhino PP1195

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Are Rhino Linings Products Safe to Use in Ice Baths?

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Do Chest Freezers need to be lined for Ice Bath Usage?

Chest freezers are not designed to be ice baths and will need an internal protective coating to strengthen the freezer, waterproof any gaps with a solvent free gap filler (e.g Sikaflex), minimise the chance of rust and corrosion. The same applies to the internal space of both plastic and metal coated chest freezers.

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Are Rhino Linings Products Safe to Use in Ice Baths?

Both Rhino Linings TUFF STUFF and Rhino PP1195 are VOC-Free after a short cure time of 5 seconds for PP1195 and 20 seconds for TUFF STUFF. Both products are also potable water certified meaning that they are safe to contain drinking water long-term without any leaching of chemicals. Our products are also used extensively to line huge capacity water tanks which are used

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for bathing and drinking water supply amongst other domestic and Industrial uses. You can find our <u>Rhino Linings TUFF STUFF Potable Water Certification Here</u> and our <u>Rhino PP1195 Potable Water</u> <u>Certification Here</u>.



Overview of Rhino Linings TUFF STUFF and PP1195

Technical Data Sheets

Rhino Linings TUFF STUFF Rhino PP1195

Main points to note about the two products:

- Both products will provide the same high level of protection against rust and corrosion.
- Both products are easy to clean.
- PP1195 is a pure polyurea which sets faster, can be applied in high humidity, and is mainly used in Industrial environments where these conditions apply. This specialised product is more expensive than the TUFF STUFF option and excessive for the coating needed for Ice Baths.
- All Rhino Linings Automotive Applicators have the ability and equipment to spray-coat with TUFF STUFF.
- Mostly only Rhino Linings Industrial Applicators have the ability and equipment to spray-coat PP1195.
- Top coating is not recommended for either application as minimal layers of coating leaves less chance for adhesion errors.
- As with all coatings it is essential that the Applicator prepares the substrate properly as per Rhino Linings training guidelines. The better the profiling work done to the substrate the better the cohesion and longevity will be for the products.
- It is recommended that our Applicators spray-coat the entire internal area at 2-3mm with the top edge under the lid at less than a millimetre.
- It is very difficult to put a lifespan on either of these products being used as Ice Bath coatings. We have been coating Ice Baths for a few years now without any complaints in Australasia and supply a lifetime warranty for the original purchaser of our ute linings which theoretically endure a lot harsher time.



The Ice Bath Application Procedure Explained

Don't attempt to do anything to try and assist to save money with the Applicator. It will most likely cost more to fix or even make the freezer unable to get Rhino Lined. TUFF STUFF and PP1195 are

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specialised products that will not adhere to silicon and other gap fillers. Leave the entire coating job with the Rhino Applicator with clear instructions of what you require e.g top edge of freezer coated or not. The following procedures only apply to both Rhino Linings TUFF STUFF and PP1195.

The Applicators process will be...

- Clean the entire freezer internal with Acetone, or similar product, to remove any contaminants.
- Wire or fibre tape the edge of the liner termination lines.
- Mask all areas that are not to get any TUFF STUFF (or PP1195) overspray on them.
- Profile the substrate by mechanical or hand sanding the surface to be coated to a profile of 50µ -70µ.
- After sanding to a profile remove any sanding contaminants by wiping out with acetone.
- All internal seams and drain hole in the freezer are sealed with Sikaflex.
- Then spray apply TUFF STUFF (or PP1195) the internal area at a recommended 2mm 3mm thickness with TUFF STUFF (or PP1195). Note: There is no need to seal any seams with other products as TUFF STUFF (or PP1195) are monolithic seamless liners that will seal all joints as the liner is being spray applied.
- Spray coat the freezer lid rail area at a recommended 2mm with TUFF STUFF (or PP1195) if required.
- Use gloves throughout the following demasking stage to prevent marks during the curing stage.
- After about 10 minutes remove wire or fibre tape at a 45° or 90° angle depending on the positioning.
- Demask the freezer.
- Allow a recommended 24 hour wait until utilisation to allow for full cure and hardness.

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Chest Freezer Ice Bath Application Areas

- A standard application requires applying TUFF STUFF (or PP1195) to the inside, top freezer rails and approximately 2.5cm down the outer freezer walls.
- For a totally sealed chest freezer the drainage hole should also be covered with TUFF STUFF (or PP1195) so that there are no weak areas.
- For additional cost the outside walls and lid can be coated but this would only be for aesthetic purposes and has no effect on the operation of the ice bath. Any vents should be removed and sprayed separately to avoid any TUFF STUFF (or PP1195) coating the mechanics of the freezer which could cause a malfunction.
- Any other areas can be coated as per requirements. Discuss options with your Rhino Linings Applicator.



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The Following Needs to be Masked Before Having Rhino Linings TUFF STUFF or PP1195 Applied...

- The hinge areas on the freezer lid and body. Hinges will not operate if covered with TUFF STUFF (or PP1195).
- Any area where the mechanics of the freezer are situated.
- Anywhere electrical connections are showing.

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What Colours Do Rhino Linings Offer for Ice Baths?

We recommend black as the safest option. Other tints are available at additional cost upon request.

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What's the Cost?

Rhino Linings Applicators all own and operate their own businesses quoting independently depending on the clients' requirements and location. From what we hear the prices range from about \$600 to \$1000 with the different costs usually being associated with differing transportation costs due to location. The pricing also depend on the size of the freezer as the product is mainly quoted out at price per m². Most of our Applicators are well accustomed to spray-coating chest freezers to be utilised as ice baths and usually can just quote by supplying the make and model of the freezer to be coated. If this isn't available, then email a few pictures through to the Applicator with the approximate internal measurements of each panel so that they can calculate out the amount of product required.

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Discussion With Your Rhino Linings Applicator

Most of our Applicators have sprayed plenty of chest freezers to be used as ice baths but you might come across some that haven't yet. The experienced Truck tub liner Applicators have found it an easy crossover with much of the procedure being identical to lining Truck tubs.

If you get a rejection for the job, suggest to the Applicator that they can call the Rhino Linings Head Office for any technical advice.



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Tips

- The Rhino Applicator should do the whole job for you as far as the spray coating and sealing goes. Trying to assist prior will not save any money, may void any warranty offered and may even make it impossible to apply TUFF STUFF (or PP1195) without the costly exercise of removing all other coatings applied since the Freezer was bought.
- Rhino Linings seams won't need to be sealed as TUFF STUFF (or PP1195) are flexible enough to withstand movement in the seams. The Applicator should, however, be applying an extra thickness of TUFF STUFF (or PP1195) onto all seams prior to applying the overall coat.
- Reconfirm with the Rhino Linings Applicator that you want the Ice Bath lid to be fully closable. The Applicators usually coat the rails of the freezer about 1mm thick for this reason. If the hinges are adjustable the thickness will not be a problem to the same degree.



Rhino Linings Applicator Warranties

Discuss what warrant is applicable for your Ice Bath with your Rhino Dealer prior to commencement.

Rhino Linings Applicators should be providing a warranty for any Application problems (inadequate preparation) leakage, tearing, abrasion, cracking, or delaminating.

Remember, chest freezers were never meant to be utilised as Ice Baths and Rhino Linings will hold no responsibility for any safety related problems, freezer structural problems, operational, mechanical, or electrical problems.

Note: Rhino Linings is responsible for their products only. In this case TUFF STUFF (or PP1195). If the product is thought to be malfunctioning, then Rhino Linings will analyse the claim by their technicians to determine the cause. If that were the case, then Rhino Linings would compensate accordingly. If deemed to be a problem caused by how the product was applied, then the Applicator would be responsible for any compensation as per the warranty conditions stipulated.



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