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# TECHNICAL DATA SHEET

## Underwater Tile Adhesive

**ThistleBond 'Underwater Tile Adhesive'** is a high performance two component epoxy adhesive specifically developed for bonding surfaces, which can be applied underwater.

**ThistleBond 'Underwater Tile Adhesive'** is formulated on a complex range of epoxy resins combined with a polyamino curing system reinforced with inert fillers to enhance the adhesion properties of the whole system.

**ThistleBond 'Underwater Tile Adhesive'** can be used on virtually any surface to form an effective bond. ThistleBond Underwater Adhesive is especially effective in bonding rubber to metal.

**Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.**

### SURFACE PREPARATION

**Steel Surfaces:** Heavy contamination due to oil or grease must first be removed using **ThistleBond 'Cleaner'**. All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, or abrasive blasting. Where grinding is used, the surface should be cross-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surfaces. Where possible, abrasive blasting is the preferred surface preparation.

**Rubber and GRP Surfaces:** Surfaces should first be abraded, then cleaned to remove loose material and finally degreased with **ThistleBond Cleaner**.

### MIXING

**ThistleBond 'Underwater Tile Adhesive'** is a two component solvent free material comprising resin and hardener components which must be mixed together prior to use.

Measure 3 volume of resin component and 1 volume hardener component onto a clean mixing board or other suitable container. The two components should then be thoroughly mixed until completely streak free.

The mixed material should be used within 1 ½ hours of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

### APPLICATION

The mixed material should be pressed firmly onto the prepared surfaces and spread evenly over the surface to be bonded.

When **ThistleBond 'Underwater Tile Adhesive'** is being used to bond surfaces underwater one surface should be coated with the material above water then taken to the application site. The two pieces should then be pressed firmly together and clamped in position until the product has set, any excess material squeezed out should be scraped away before the **ThistleBond 'Underwater Tile Adhesive'** begins to cure.

**Volume Capacity**

740cc(45.2 cu ins) per kilo

**PHYSICAL CONSTANTS**

<b>Mixing Ratio</b>	Resin	Hardener	
	3	1	By Volume
	5	1	By Weight

<b>Appearance</b>	Resin	White Thixotropic Paste
	Hardener	Straw Colour Viscous Liquid

**Drying & Cure**

<b>Times at 20°C</b>	Usable Life	1½ hours
	Tack Free	3 hours
	Full Cure	72 hours

**Volume Solids** 100%**V.O.C.** Nil**Shelf Life** Indefinite in original sealed containers when stored between 5°C (40°F) and 40°C (104°F).**PHYSICAL PROPERTIES****Hardness (Rockwell R)** 82  
ASTM D2240**Tensile Shear Adhesion**ASTM D1002  
Aluminium - Dry/Dry 6.8N/mm<sup>2</sup> (980 psi)  
Aluminium - Dry/Wet 6.2N/mm<sup>2</sup> (900 psi)**Direct Pull Adhesion**ASTM D4541  
PU Tiles 3.4N/mm<sup>2</sup> (500 psi)  
Cohesive Failure in Tile  
**Neoprene** >14N/mm<sup>2</sup> (2000psi)  
(Test Limit)**HEALTH AND SAFETY**As long as normal good practice is observed **ThistleBond 'Underwater Tile Adhesive'** can be safely used.

Protective gloves should be worn during use.

A fully detailed **Material Safety Data Sheet** is either included with the material or is available on request.**PACKAGING**

Supplied in 2kg and 5kg packs.

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests. Detailed specifications are available on request from the company.

FOR FURTHER INFORMATION PLEASE CONTACT


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