

TECHNICAL DATA SHEET

UPS 19003 THISTLEBOND A&B CEMENT

IMPA 81 22 31



UPS 19003 ThistleBond A&B Cement is a high performance, two pack, solvent free epoxy repair system for use on metallic surfaces. The product is ideal for application where only minimal surface preparation can be carried out and is usually used in conjunction with UPS 19000 RH ThistleBond Standard Resin & Hardener.

Product Information

Product Features

- Can be used on any surface.
- Is suitable for use as a filler as well as an adhesive.
- Developed for repairs where difficult adhesion conditions exist.

Product Applications

Typically, the material is used in conjunction with UPS Composite Repair Systems as a cost-effective surface filler prior to application of UPS 19000 RH and UPS 19007/9 GT. The material can be used for;

Filling of pitting and scarring on badly corroded or eroded metallic surfaces.



Surface Preparation
Manual - Mechanical



Lighting Loading
6 hours



Spatula or Applicator
Tool Applied



Cost Effect Solution

Surface Preparation

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. Where possible abrasive blast the surface to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.

PLEASE NOTE - This product has been designed for surfaces with less than ideal surface preparation.

Hand Tools – Use a wire brush or coarse sandpaper to abrade the surface. Follow above instructions.

Mechanical Tools – Use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush. Follow above instructions. **DO NOT POLISH THE SURFACE, ENSURE THAT THE SURFACE HAS A CROSS HATCH PATTERN.**

UPS MiniBlaster – For the best mechanical surface preparation results, use the UPS MiniBlaster. Follow above instructions.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).
3. The ambient & surface temperatures are not less than 3°C (6°F) above the dew point.

Then proceed with mixing the product:

1. Mix all Base and Activator together on a clean plastic mixing surface
2. Using a spatula, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, using a spatula place 1 equal measure from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 1 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Application

Spatula or applicator tool applications -

1. Apply the material to the prepared surface, ensure the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.
2. Where the material is to be over coated, this can be done as soon as it is touch dry and at any time up to 24 hours.
3. Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Bonding Surfaces - Both surfaces should be coated with the material. The two pieces should then be pressed firmly together and clamped in position into the product has set, any excess material squeezed out should be scraped away before the product begins to cure.

Repairs – In the case of a repair the product should be troweled into the crack before proceeding with the repair. Where the crack is still leaking a little, then it is recommended that UPS 19003 A&B should be left to cure partially before being re-troweled into the crack.

PLEASE NOTE - Once *UPS 19003 A&B* has cured for a minimum of 2 hours at 20°C (68°F), sanding, grinding and machining etc., can be carried out.

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Technical Data & Performance

Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -

0.625m ² at 1mm	6.7ft ² at 40mil
0.313m ² at 2mm	3.3ft ² at 80mil
0.208m ² at 3mm	2.2ft ² at 1/8"

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied material to harden for the times shown below before subjecting them to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures.

Useable Life	30 minutes
Movement Without Load or Immersion	2 hours
Light Loading	6 hours
Full Loading	2 days
Immersion	3 days

Appearance

Mixed Material Colour	Dark Brown
Base Component Colour	Dark Grey
Activator Component	Light Brown

Available Colours

Grey

Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry
Maximum	The over coating time should not exceed 24 hours

Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Shelf Life

5 years if unopened and store in normal dry conditions (15-30°C / 60-86°F)

Mixing Ratio

Component	Base	Activator
By Weight	1	1
By Volume	1	1

Density

Base	1.60
Activator	1.60
Mixed	1.60

Volume Capacity

625cc/Kg

Solids Content

100%

Slump Resistance

Nil at 2.0cm

Pack Sizes

200GM (0.44LB)	1KG (2.2LB)	3KG (6.6LB)
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Useable Life

10°C (50°F)	50 minutes
20°C (68°F)	25 minutes

30°C (86°F)

12.5 minutes

Mechanical Properties

Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75-micron profile)	148kg/cm ² (2,100 psi)
Pull off Adhesion ASTM D4541 (Abrasive Blasted Mild Steel with 75-micron profile)	244kg/cm ² (3,480 psi) Manually prepared steel plate
Compressive Strength ASTM D695	115kg/cm ² (1,640 psi)
Corrosion Resistance ASTM B117	735kg/cm ² (10,450 psi) Minimum 5000 hours
Flexural Strength ASTM D790	298kg/cm ² (4,250 psi)
Hardness Rockwell R ASTM D785	100
Heat Distortion ASTM D648 At 264psi Fibre Stress	20°C (68°F) Cure – 58°C (136°F) 100°C (212°F) Cure – 98°C (208°F)

Heat Resistance

Suitable for long-term water immersion at temperatures up to 70°C (158°F).

Resistant to dry heat in excess of 150°C (302°F) dependent on load.

Chemical Resistance

The product demonstrates resistance to a wide variety of inorganic acids, alkalis, salts and organic media. Refer to the Unique Polymer Systems Technical Centre for advice.

Global Availability

UPS 19003 ThistleBond A&B Cement is available from a network of Global Distributors for prompt delivery. For further details and the location of your local distributor, please contact Unique Polymer Systems on:

+44(0) 1531 636300 | sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:

+44(0) 1531 636300 | sales@uniquepolymersystems.com

Official Approvals



The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product

Quality: All Unique Polymer Systems Products are supplied under the scopes of the company's fully documented quality system.

Warranty: Unique Polymer Systems warrants that the performance of the product supplied will conform to the typical descriptions quoted within this Technical Data Sheet provided the material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

Health & Safety: Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

Legal Notice: The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Unique Polymer Systems accepts no liability arising out of the use of this information or the product described herein.

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