



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

Suitable for rebuilding corrosion pitting on metallic structures and in particular, as a fairing compound on pipework prior to wrapping with the UPS 19000 RH Pipe Repair System.

#### 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.

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

#### Surface Preparation

Ideal surface preparation for this material is abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** and a minimum blast profile of 75 microns using an angular abrasive.

However this product has been designed for surfaces with less than ideal surface preparation.

**Hand Tools** – Use a wire brush or coarse sand paper to abrade the surface. Ensure all loose material and as much surface contamination is cleaned from the surface and ensure the surface is wiped with UPS CLEANER MEK prior to, and after abrading the surface.

**Mechanical Tools** – Use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush. Ensure all loose material and as much surface contamination is cleaned from the surface. **DO NOT POLISH THE SURFACE, ENSURE THAT THE SURFACE HAS A CROSS HATCH PATTERN.** Ensure the surface is wiped with UPS CLEANER MEK, prior to and after abrading the surface.

**UPS MiniBlaster** – For the best mechanical surface preparation results, use the UPS MiniBlaster. Ensure all loose material and as much surface contamination is cleaned from the surface. Ensure the surface is wiped with UPS CLEANER MEK prior to, and after abrading the surface.

For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface. After this 24-hour period the surface must be washed with UPS CLEANER MEK prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained contaminants have been sweated out of the surface.

#### Mixing & Application

Warm the Base component to 15 – 25°C (60 – 77°F) before mixing and do not apply when the ambient or substrate temperature is below 5°C (40°F) or less than 3°C (37°F) above the dew point.

Mixing of the product can be in full units or by part mixing. If mixing the whole unit please ensure as much of the Base and Activator is dispensed from the plastic container onto a clean plastic mixing surface and mix using a spatula until a uniform material free of any streakiness is achieved, whilst ensuring no unmixed material is left on the spatula or the mixing surface. From the commencement of mixing, the whole of the material should be used within 30 minutes at 20°C (68°F).

For part mixing, using a spatula, place equal measures of the Base and Activator onto a clean plastic mixing surface, cleaning the spatula thoroughly between the taking of each measure. Mix as above.

Using a spatula or applicator tool, or for larger areas, a float, apply the material to the prepared surface, ensuring the material is pressed into any pitting or other defects and profile the repair to a smooth finish.

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. 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.

When UPS 19003 A&B is being used to bond two surfaces together, 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 UPS 19003 A&B begins to cure.

Where a repair is to be carried out on a cracked pipe then UPS 19003 A&B 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.

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.

### Technical Data & Performance

#### Characteristics

##### Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -	
0.625m <sup>2</sup> at 1mm	6.7ft <sup>2</sup> at 40mil
0.313m <sup>2</sup> at 2mm	3.3ft <sup>2</sup> at 80mil
0.208m <sup>2</sup> at 3mm	2.2ft <sup>2</sup> at 1/8"
<i>Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.</i>	

##### Drying & Cure Times at 20°C (68°F)

Useable Life	30 minutes
Movement Without Load or Immersion	2 hours
Light Loading	6 hours
Full Loading	2 days
Immersion	3 days
<i>Once hardener, the material should be left for the following periods of time at 20°C (68°F) before being subjected to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)</i>	

##### Appearance

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

##### 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
<i>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.</i>	

##### 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

This product is available in the following pack sizes:  
200GM, (0.44LB), 1KG (2.2LB), 3KG (6.6LB)

#### Useable Life

10°C (50°F)	50 – 60 minutes
20°C (68°F)	25 – 30 minutes
30°C (86°F)	15 – 20 minutes

#### Mechanical Properties

<b>Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75 micron profile)</b>	185kg/cm <sup>2</sup> (2,630 psi)  129kg/cm <sup>2</sup> (1,834 psi) Manually Prepared
<b>Compressive Strength ASTM D695</b>	735kg/cm <sup>2</sup> (10.4500 psi)
<b>Corrosion Resistance ASTM B117</b>	Minimum 5000 hours
<b>Flexural Strength ASTM D790</b>	298kg/cm <sup>2</sup> (4,250 psi)
<b>Hardness Rockwell R ASTM D785</b>	100
<b>Heat Distortion ASTM D648 At 264psi Fibre Stress</b>	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 resists attack by a wide variety of inorganic acids, alkalis, salts and organic media. Refer to the Unique Polymer Systems LTD Technical Centre for advice.

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

**Warranty:** Unique Polymer Systems LTD warrants that the performance of the product supplied will confirm 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 LTD accepts no liability arising out of the use of this information or the product described herein.