

Technical Data Sheet

UPS 125 XFP Fast Curing Metal Paste



UPS 125 XFP Fast Curing Metal Paste is a fast curing two component solvent free epoxy metal repair compound. The product has been designed for use on a wide range of metallic surfaces and once cured is readily machineable.

Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as damaged pump shafts, cracked pump or valve casings, damaged flanges, leaking tank seams, cracked engine blocks, underwater surfaces, underwater hulls & underwater structures.

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

Surface Preparation

All oil and grease must be removed from the surface of the repair using UPS CLEANER MEK.

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 angular abrasive.

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

Hand Tools – Use a wire brush or coarse sand paper to abrade the surface.

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

UPS MiniBlaster – For the best mechanical surface preparation results use an 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 after abrading the surface.

PLEASE NOTE 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.

In areas where the product should not adhere, a thin layer of UPS RELEASE AGENT should be applied taking care not to contaminate other areas.

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 on 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 while 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 5 minutes at 20°C (68°F).

For part mixing, using a spatula place equal measures from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take one equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Using a spatula or applicator tool, apply the material to the prepared surface, ensuring the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.



Unique Polymer Systems LTD,
Unit 19, Link Business Centre,
Link Way, Malvern, Worcestershire,
WR14 1 UQ, United Kingdom,
+ 44 (0) 1531 63 63 00
sales@uniquepolymersystems.com



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Technical Data & Performance

Characteristics

Coverage Rates

500GM (1.1LB) of fully mixed product will give the following coverage rates -	
0.222m at 1mm	2.4ft at 40mil
0.111m at 2mm	1.2ft at 80mil
0.074m at 3mm	0.8ft 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	5 minutes
Movement Without Load or Immersion	45 minutes
Machining & Light Loading	90 minutes
Full Loading	4 hours
Immersion	8 hours
<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	Mid Grey Paste
Base Component Colour	Mid Grey Paste
Activator Component	White Fluid

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 4 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

1 year 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	1.8
Activator	1.8
Mixed	1.8

Volume Capacity

555cc/Kg

Solids Content

100%

Slump Resistance

Nil at 20mm

Pack Sizes

This product is available in the following pack sizes; 200GM (0.4LB), 500GM (1.1LB)

Useable Life

10°C (50°F)	10 minutes
20°C (68°F)	5 minutes
30°C (86°F)	2.5 minutes

Mechanical Properties

Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75 micron profile)	185kg/cm (2,630 psi)
Compressive Strength ASTM D695	185kg/cm (2,630 psi)
Corrosion Resistance ASTM B117	Minimum 5000 hours
Lap Shear ISO 4587	240kg/cm (3,400 psi)
Hardness Rockwell R ASTM D785	85
Heat Distortion ASTM D648 At 264psi Fibre Stress	20°C (68°F) Cure – 60°C (140°F)

Heat Resistance

Suitable for long-term water immersion at temperatures up to 60°C (140°F).

Resistant to dry heat in excess of 130°C (266°F) dependent on load.

Chemical Resistance

The product resists attack by a wide variety of low concentration 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.



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WR14 1 UQ, United Kingdom,
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