TECHNICAL DATA SHEET
UPS 125 XFP FAST CURING METAL PASTE

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

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 machinable.

Product Information

Product Features

- Excellent adhesion to manually prepared surfaces.
- Will cure in fully submersed conditions.
- Fast curing metal repair paste.
- Apply at thickness up to 20mm
- Apply via **Hand Tools** using a wire brush or coarse sandpaper or via Mechanically cleaned surfaces.

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.

Surface Preparation Manual – Mechanical – Abrasive Blast

Will Fully Cure Submersed Conditions.

Wet Heat Resistance up to 60°C (140°F).

Cost Effect Solution

Surface Preparation

Metallic Substrates – Hand Tools

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be cleaned using wire brush, metal file, coarse sandpaper etc.
3. Once abraded, the surface must be degreased using an appropriate cleaner such as UPS 9918 MEK Cleaner.

Metallic Substrates – Mechanical tools

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. Ideal surface preparation for this product is abrasive blasting to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive DO NOT POLISH THE SURFACE, ENSURE THAT THE SURFACE HAS A CROSS HATCH PATTERN. **UPS MiniBlaster** is the best mechanical surface preparation results or use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and eft 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 9918 MEK Cleaner 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 9921 Release Agent should be applied taking care not to contaminate other areas.

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 5°C (41°F).

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. Ensuring no unmixed material is left on the spatula or mixing board.
3. From the commencement of mixing the whole of the material should be used within 5 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 using a gloved hand.

Technical Data & Performance

Coverage Rates

200GM (0.44LB) of fully mixed product will give the following coverage rates -	
0.111m² at 1mm	1.2ft² at 40mil
Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.	

Coverage Rates

500GM (1.1LB) of fully mixed product will give the following coverage rates -	
0.278m² at 1mm	5.38ft² at 40mil
Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.	

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Drying & Cure Times

At 20°C (68°F) the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated.
These times will be extended at lower temperatures and reduced at high temperatures:

Useable Life	5 minutes
Movement Without Load or Immersion	45 minutes
Full Cure	4 hours
Immersion	8 hours

Appearance

Mixed Material Colour	Mid Grey Paste
Base Component Colour	Black Paste
Activator Component	White Fluid

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 4 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.

Mixing Ratio

Component	Base	Activator
By Weight	1	1
By Volume	1	1

Density

Base	1.80
Activator	1.80
Mixed	1.80

Volume Capacity

555cc/Kg

Solids Content

100%

Sag Resistance

Nill at 20mm

Useable Life

10°C (50°F)	10 minutes
20°C (68°F)	5 minutes
30°C (86°F)	2.5 minutes
40°C (104°F)	75 seconds

Pack Sizes

200GM (0.4LB)	500GM (1.1LB)

Shelf Life

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

Mechanical Properties

Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75-micron profile)	185kg/cm² (2,630 psi)
Pull off adhesion To ASTM D4541 (Abrasive Blasted Mild Steel with 75-micron profile)	155kg/cm² (2205psi)
Compressive Strength ASTM D695	165kg/cm² (8750psi)
Corrosion Resistance Tested to ASTM B117	Minimum 5000 hours
Flexural Strength Tested to ASTM D790	655kg/cm² (9315 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 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 125 XFP FAST CURING METAL PASTE 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 I sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

Official Approvals

BUREAU VERITAS 1828
BUREAU VERITAS
Certificate No.
58535/A0 BV

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 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 accepts no liability arising out of the use of this information or the product described herein.