

Technical Data Sheet

UPS 120 XFF Fast Curing Fluid Metal



UPS 120 XFF Fast Curing Metal Fluid is a fast curing two component solvent free epoxy metal repair fluid. The product has been designed for use on a wide range of metallic surfaces where surface preparation is restricted and where the surface is contaminated with oil or grease.

Product Features

- Touch dry in 25 minutes.
- Highly machinable.
- *Recommended for transformer repairs, as adhesion to Transformer Oil is exceptional.*

Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as damaged flanges, leaking tank seams and pipework.

Ideally suited for the repair and resurfacing of transformers where weeping or leaking oil is contaminating the repair surface.

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

Surface Preparation

Damaged components or equipment – Ideal surface preparation for this material is abrasive blast cleaning 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. 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.

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 are as 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.

Leaking Transformer Surfaces – Re repair a weeping / leaking transformer surface mixed UPS 120 XFF must be applied with 10-15 second of the surface being cleaned. *DO NOT ABRABE THE SURFACE WITH ANY MECHANICAL TOOLS.* If possible use a wire brush to take off any loose corrosion or coating, then wipe the surface with a solvent wipe and take away as much excess oil as possible.

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 measure. Mix as above.

Damaged Components & Equipment Repairs – Using a brush or applicator tool, apply the material to the prepared surface, ensuring the product is pressed into any scars or cracks and profile the repair to a smooth finish. If required the product can be used in conjunction with reinforcement tape and used to wrap round leaking pipe work.

Leaking Transformer Surfaces – Use the applicator tool to scrape the mixed material off the mixing board, apply UPS 120 XFF onto the surface, press the material onto the weeping / leaking surface. Apply the material to a target thickness of -3mm (up to 1/8"). Do not overwork the material on the repair surface. Once in place on the repair surface allow to cure for 20-30 minutes.



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Technical Data & Performance Characteristics

Coverage Rates

800GM (1.6LB) of fully mixed product will give the following coverage rates	
0.444m at 1mm	5.9ft at 40mil
0.222m at 2mm	3ft at 80mil
0.148m at 3mm	2ft 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	2 hours
Full Loading	8 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 Fluid
Base Component Colour	Black Fluid
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

444cc/Kg

Solids Content

100%

Slump Resistance

Nil at 3mm

Pack Sizes

This product is available in the following pack sizes;
200GM (0.4LB), 800GM (1.6LB)

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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