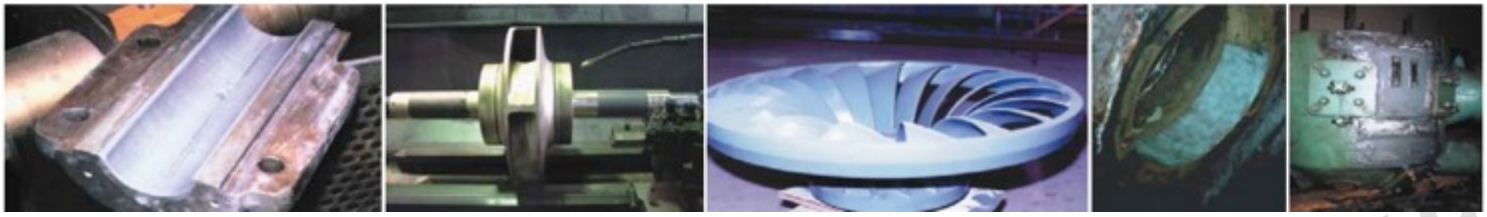

UniquePolymerSystems.com
*The Engineer's Choice*
*... for Solutions*

*UPS 110 FG* Fluid Metal Repair is a high performance synthetic metal compound specially developed for resurfacing and reforming damaged metal machinery and equipment.

*UPS 110 FG* is based on a complex blend of epoxy resins combines with a polyamino curing system reinforced with a phosphor steel alloy to enhance the corrosion and chemical resistance of the whole system.

**Product Features**

- Designed for application by stiff brush or squeegee.
- Provides outstanding slip resistance in combination with UPS Aggregates on drive rollers.
- Primarily designed for resurfacing and recasting metal components.
- Exhibits excellent adhesion to correctly prepared metal surfaces.

**Product Applications**

*UPS 110 FG* can be applied to any damaged component and provides an excellent slip resistant surface in combination with a UPS Aggregate, and is ideal for drive rollers and brake test rollers where drip is essential.

Suitable for resurfacing damaged and worn pump casings, valve bodies, worn bearing housings, damaged flanges, etc.

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

**Surface Preparation**

Heavy contamination due to oil or grease must first ne removed using *UPS TAC 883 Universal Cleaner*. All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, needle gun or abrasive blasting.

Where grinding or needle gunning is used, the surface should be crossed-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surface. Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs.

Surfaces should finally be carefully degreased with *UPS TAC 883*. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, the cleaner should be worked into the surface by brush and washed off using excess cleaner.

Parts (for example, threads or bearing surfaces) which must remain in position during application but must not adhere to *UPS 110 FG* must be coated with *UPS TAC 872 Release Agent* prior to application of the *UPS 110 FG*.

When treating existing equipment which may have become salt impregnated due to service conditions, surfaces should first be wet blasted then dry blasted and tested for presence of salts. This process should be repeated until all salts are fully removed.

**Mixing**

*UPS 110 FG* is a two pack product comprising a Base and Activator component which must be missed together prior to use.

Two volumes of Base component and one volume Activator component should be transferred to a clean container. The two components should then be thoroughly mixed to produce a completely streak free material.

The mixed material should be used within 40 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

**Application**

The mixed material should be applied by stiff brush or squeegee to the prepared area as soon as possible after surface preparation, and certainty the same day to prevent flash rusting. If flash rusting does occur, the surface should be re-prepared.

On deeply pitted surfaces, the mixed *UPS 110 FG* must be worked into the surface to ensure complete 'wetting out' and prevention of air entrapment. When a two coat application of *UPS 110 FG* is specified, the second coat can be applied a minimum of 4 hours after the first application. The maximum over coating time is 2 days at 20°C (68°F) if this time is extended, the surface of the *UPS 110 FG* should be lightly abraded prior to application of the second coat.

Where slip-resisting system is required, a grip should be scattered into freshly applied *UPS 110 FG*.

On applications using formers treated with *UPS TAC 872* Release Agent, these formers can be removed as soon as the *UPS 110 FG* has initially set.

All equipment must be cleaned immediately after use, with *UPS TAC 883*.

| Theoretical Coverage Rate |
|---|
| 1.88m$^2$ / 1kg at 250 microns dft<br>(20ft$^2$/ 1kg at 10 mils) |

**Physical Constraints**

| Mixing Ratio | Base | Activator |
|---|---|---|
| By Weight | 5 | 1 |
| By Volume | 2 | 1 |

| Colour | Grey |
|---|---|

| Drying & Cure Times at 20°C (68°F) | |
|---|---|
| Useable Life | 40 minutes |
| Initial Set | 4 hours |
| Minimum Over Coating | 4 hours |
| Maximum Over Coating | 48 hours |
| Machining | 8 hours |
| Full Cure | 7 days |

| Volume Solids | 100% |
|---|---|

| Film Thickness | 250 microns (10 mils) |
|---|---|

| Shelf Life |
|---|
| Use within 5 years of manufacture date. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F). |

| Maximum Operating Temperatures | |
|---|---|
| Dry Heat | 120°C (248°F) |
| Wet Heat | 70°C (158°F) |

**Physical Properties**

| Compressive Strength ASTM D 695 | 63 Mpa (9000 psi) |
|---|---|

| Flexural Strength ASTM D 790 | 49 Mpa (7000 psi) |
|---|---|

| Hardness (Barcol) ASTM D 2583 | 31 |
|---|---|

| Heat Distortion ASTM D 648 | 60°C (140°F) |
|---|---|

| Tensile Shear Adhesion ASTM D 1002 | 20 Mpa (2825 psi) (Abrasive Blasted Steel) |
|---|---|

| Izol Impact Strength ASTM D 256 Method A | 15 J/m |
|---|---|

| Abrasion Resistance CS17 Wheel ASTM D 4060 | 42.5mgm (0.02cc) loss per 1000 cycles, 1kg load |
|---|---|

**Packaging**
*UPS 110 FG* is supplied in the following;
4 X 1kg

**Heath And Safety**
As long as normal good practice is observed *UPS 110 FG* can be safely used. Protective gloves should be worn during use.

A fully detailed Material Safety Data Sheet is either included with the material or is available on request.





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