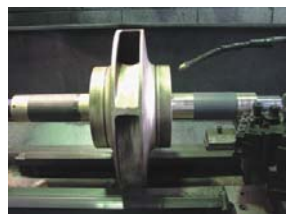
Unique Polymer Systems

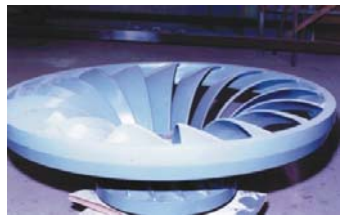
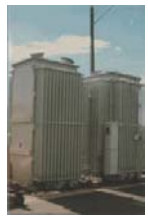
ADVANCED POLYMER SURFACE ENGINEERING TECHNOLOGY

Unique Polymer Systems - 'Extended Life Super Metal Rebuilding System'

UPS 'Extended Life Super Metal Rebuilding System' is a high performance multi purpose synthetic metal repair compound which has been specifically developed for repairs requiring good mechanical strength combined with easy machining properties and where additional working time is essential during the application period.

The UPS 'Extended Life Super Metal Rebuilding System' formulation contains a complex range of epoxy resins combined with a polyamino-amine curing system reinforced with a phosphor steel alloy to enhance the corrosion and chemical resistance of the overall system.


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 be removed using UPS '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 cross-scored to improve adhesion. Care must be taken when angle grinding, to avoid polishing rather than roughening the surface.

Surfaces should be carefully degreased using UPS 'Cleaner'. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, UPS '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 'Extended Life Super Metal Rebuilding System' must be coated with UPS 'Agent'.

MIXING

UPS 'Extended Life Super Metal Rebuilding System' is a two component material comprising resin and hardener components which must be mixed together prior to use.

Measure one volume of resin component and one volume of hardener component onto a clean mixing board or other suitable surface. The two components should then be thoroughly mixed until completely streak free.

The material should be used within 60 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

APPLICATION

The mixed UPS 'Extended Life Super Metal Rebuilding System' should be pressed firmly onto the prepared area, working the material into any cracks and surface defects, taking care not to trap air in deeply pitted areas.

When required, a reinforcement tape can be used to improve the mechanical properties, or to bridge large gaps. The reinforcing Tape should be impregnated with the UPS 'Extended Life Super Metal Rebuilding System' then stippled into the first layer of product applied to the repair. Further material should then be applied over the tape.

Once the UPS 'Extended Life Super Metal Rebuilding System' has reached initial set the material can be separated from surfaces treated with UPS 'Release' Agent.

Once the material has cured for a minimum of 12 hours at 20°C (68°F) sanding, grinding and machining etc can be carried out using standard engineering facilities.

All equipment must be cleaned IMMEDIATELY after use with UPS 'Cleaner'.

Volume Capacity
392cc (23.94 cu ins) per kilo

PHYSICAL CONSTANTS

Mixing Ratio	Resin	Hardener	
	1	1	By volume
	1.15	1	By Weight

Appearance		
	Resin	Dark Grey Paste
	Hardener	Light Grey Paste

Drying & Cure times at 20°C (68°F)

Usable Life	60 minutes
Initial Set	4 hours
Machining	12 hours
Full Mechanical	5 days

Volume Solids
100%

V.O.C
Nil

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

Operating Temperature

	Maximum	Continuous
Dry Heat	120°C (250°F)	120°C (248°F)
Wet Heat	120°C (248°F)	70°C (158°F)

PHYSICAL PROPERTIES

Flexural Strength ASTM D790	560 kg/cm² (8000 psi)
Compressive Strength ASTMD695	700 kg/cm² (10000 psi)
Tensile Shear Adhesion ASTM D100	175 kg/cm² (2500 psi) (Grit Blasted Steel)
Heat Distortion ASTM D648	60°C (140°F)
Hardness (Shore D) ASTM D2246	85
Corrosion Resistance ASTM B117	5,000 hours

HEALTH AND SAFETY

As long as normal good practice is observed 'Extended Life Super Metal Rebuilding System' can be safely used.

Protective gloves should be worn.

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

PACKAGING

Supplied in 3kg packs.

FOR FURTHER INFORMATION PLEASE CONTACT

Unique Polymer Systems
www.UniquePolymerSystems.com
Quarry House, Hollybush, Ledbury,
Herefordshire. HR8 1ET. UK
Tel: +44(0)1531 636300
Fax: +44(0)8700 558801
Email: sales@UniquePolymerSystems.com