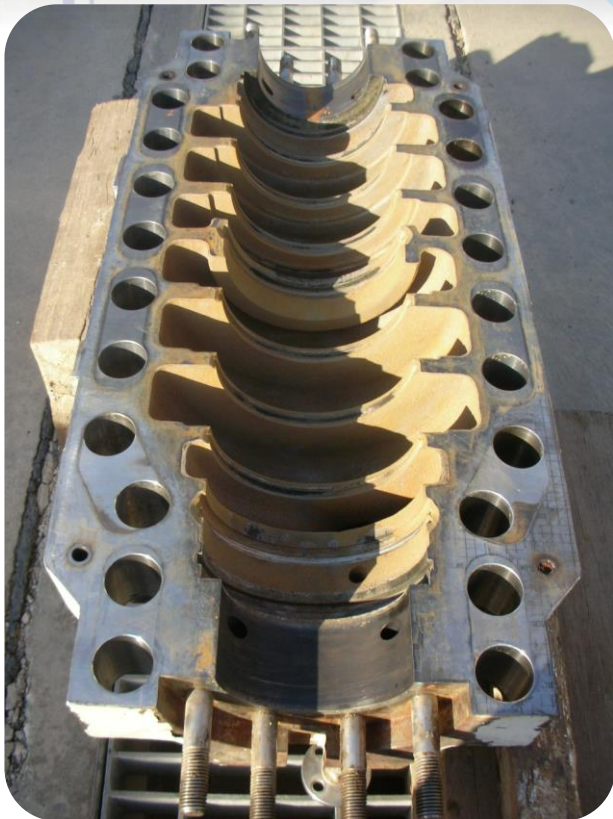


Unique Polymer Systems LTD Metal Repair Systems



Unique Polymer Systems LTD – Introduction

Unique Polymer Systems LTD is a globally renowned supplier of a wide range of high performance Metal Repair materials which offer ideal solutions to worn or damaged mechanical components and process equipment surfaces.

Our Unique Metal Repair product range is manufactured in the heart of UK and exported to over 40 countries worldwide. We are able to provide local solutions in North & South America, Africa, Europe, Middle East and Asia using our highly recognized Distributors & Applicator Networks.

Our Metal Repair products are used within all types of industries, throughout our extensive worldwide network of Distributors & Applicators. We are able to offer onsite technical support, training, presentations & seminars back by system recommendations & technical specifications.

Oil & Gas
Marine (ThistleBond)
Power Generation
Paper & Pulp
General Industry
Chemical & Corrosion
Water & Waste Water
Petrochemical



Metal Repair Systems – Product Information



Unique Polymer Systems LTD,
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Metal Repair Systems - Leaflet

UPS 105 EG Metal Repair Paste

Multi-purpose solvent free epoxy repair paste for metallic surfaces	Apply up to 25mm without sagging	Rebuild damaged metallic surfaces	Useable life – 30 mins	Dark Grey
	No shrinkage	Bond metal to metal	Touch dry – 90 mins	
	Apply by spatula or applicator tool	Machine once hard dry	Machinable – 2 hours	
			Hard dry – 8 hours	

UPS 110 FG Fluid Grade Metal

Multi-purpose solvent free epoxy repair fluid for metallic surfaces	Apply up to 3mm without sagging	Resurface worn metallic surfaces	Useable life – 30 mins	Dark Grey
	No shrinkage	Add aggregate to create anti-slip finish	Touch dry – 90 mins	
	Apply by brush or applicator tool		Hard dry – 8 hours	

UPS 115 XL Extended Life Metal

Multi-purpose solvent free epoxy repair paste for metallic surfaces with a longer pot life for warmer climates	Extended working life for warmer climates	Rebuild damaged metallic surfaces	Useable life – 60 mins	Dark Grey
	No shrinkage	Bond metal to metal	Touch dry – 5 hours	
	Apply by spatula or applicator tool	Machine once hard dry	Machinable – 12 hours	
			Hard dry – 18 hours	

UPS 120 XFF Fast Curing Fluid Metal

Fast curing solvent free epoxy fluid for oily or manually prepared surfaces	Fast curing, hard dry in 30 minutes	Seal leaking oily surfaces	Useable life – 5 mins	Light Grey
	Apply using applicator tool	Resurface worn or damaged metallic surfaces	Touch dry – 30 mins	
	Apply up to 3mm without sagging	Bond metal to metal	Hard dry – 2 hours	

UPS 125 XFP Fast Curing Metal Paste

Fast curing solvent free epoxy paste for manually prepared surfaces. Suitable for underwater repairs	Fast curing, hard dry in 30 mins	Rebuild or resurface damaged metallic substrates	Useable life – 5 mins	Light Grey
	Apply up to 15mm without sagging		Touch dry – 30 mins	
	Apply by spatula or applicator tool	Seal or repair underwater metallic surfaces	Hard dry – 2 hours	

UPS 19060 SG Stick Grade Metal (Formally TRK 19060)



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Multi-purpose fast curing solvent free epoxy repair putty in stick form	Fast curing, hard dry in 30 mins Apply using a gloved hand	Seal leaking surfaces Bond metal to metal	Useable life – 5 mins Hard dry – 30 mins	Mid Grey
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UPS 19060 SGUW Stick Grade Metal UnderWater

Underwater solvent free epoxy repair stick	Apply using a gloved hand Fast curing, hard dry in 90 mins	Seal or plug leaking surfaces Bond or repair underwater surfaces	Useable life – 15 mins Hard dry – 90 mins	Cream
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Metal Repair Systems - Leaflet

Metal Repair Systems – Typical Applications

	<u>UPS 105</u> <u>EG</u>	<u>UPS 110</u> <u>FG</u>	<u>UPS 120</u> <u>XFF</u>	<u>UPS 125</u> <u>XFP</u>	<u>UPS 115</u> <u>XL</u>	<u>UPS</u> <u>19060</u> <u>SG</u>
Base Plate – Cracked						
Bearing Housing - Rebuild						
Bearing Support - Rebuild						
Bow Thrusters – Rebuild						
Chutes – Rebuild						
Engine Block - Rebuild						
Evaporators - Rebuild						
Flange Repair						
Heat Exchanger End Plate – Rebuild						
Hydraulic Rams – Scored						
Hoppers - Rebuild						
Keyways - Rebuild						
Kort Nozzles – Rebuild						
Pintle Sleeves – Rebuild						
Pipe Work Internal						
Process Vessel - Rebuild						
Plate Bonding						
Propeller – Rebuild / Resurface						
Pump Casing – Holed						
Pump Casing - Rebuild						
Pump Impeller - Rebuild						
Scrubber unit – Rebuild						
Slug Catchers – Repair						
Sour Gas Treatment						
Sump Repair						
Turbine Blades						
Tank Seam						
Tank Base - Internal						
Tank Repairs						



Product is suitable for this application

If you have any further questions or your application is not listed, please contact Unique Polymer Systems LTD – sales@uniquepolymersystems.com - +44(0)1531 636300



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Metal Repair Systems – Product & Testing Characteristics

	<u>UPS 105 EG</u>	<u>UPS 110 FG</u>	<u>UPS 120 XFE</u>	<u>UPS 125 XFP</u>	<u>UPS 115 XL</u>
Compressive Strength ASTM D695	1,075kg/cm ² (15,300 psi)	1,075kg/cm ² (15,300 psi)	185kg/cm ² (2,630 psi)	185kg/cm ² (2,630 psi)	839kg/cm ² (11,900 psi)
Corrosion Resistance ASTM B117	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours
Flexural Strength ASTM D790	703kg/cm ² (10,000 psi)	703kg/cm ² (10,000 psi)	240kg/cm ² (3,400 psi)	240kg/cm ² (3,400 psi)	585kg/cm ² (8,300 psi)
Hardness Rockwell R ASTM D785	100	100	85	85	100
Slump Resistance	25mm	3mm	3mm	20mm	20mm
Tensile Shear Adhesion ASTM D1002	185kg/cm ² (2,630 psi)	185kg/cm ² (2,630 psi)	185kg/cm ² (2,630 psi)	185kg/cm ² (2,630 psi)	180kg/cm ² (2,550 psi)
Volume Capacity cc per KG	406	440	555	555	388
Base Density gm per cm ³	2.7	2.7	1.8	1.8	2.7
Activator Density gm per cm ³	1.7	1.0	1.8	1.8	2.4
Mixed Product Density gm per cm ³	2.46	2.5	1.8	1.8	2.58
Dry Heat Resistance °C	200	200	130	130	180
Intermittent Wet Heat Resistance °C	120	120	80	80	90
Immersion Temperature Resistance °C	70	70	60	60	60
Mixing Ratio by Volume	3:1	3:1	1:1	1:1	3:2
Mixing Ratio by Weight	5:1	8:1	1:1	1:1	3:2



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	10°C			20°C			30°C			40°C		
	Pot Life	Machine	Hard Dry	Pot Life	Machine	Hard Dry	Pot Life	Machine	Hard Dry	Pot Life	Machine	Hard Dry
UPS 105 EG	60 mins	4 hrs	16 hrs	30 mins	2 hrs	8 hrs	15 mins	1 hrs	4 hrs	7.5 mins	30mins	2 hrs
UPS 110 FG	60 mins	3 hrs	16 hrs	30 mins	90 mins	8 hrs	15 mins	45 mins	4 hrs	7.5 mins	22.5 mins	2 hrs
UPS 120 XFF	10 mins	60 mins	4 hrs	5 mins	30 mins	2 hrs	2.5 mins	15 mins	1 hrs	75 secs	7.5 mins	30 mins
UPS 125 XFP	10 mins	60 mins	4 hrs	5 mins	30 mins	2 hrs	2.5 mins	15 mins	1 hrs	75 secs	7.5 mins	30 mins
UPS 115 XL	2 hrs	24 hrs	36 hrs	60 mins	12 hrs	18 hrs	30 mins	6 hrs	9 hrs	15 mins	3 hrs	4.5 hrs

Technical Back Up & Expertise



Unique Polymer Systems LTD has been provide solutions for industry since 1993. Based in the heart of the UK, Unique Polymer Systems LTD supplies an extensive range of Epoxy and Polyurethane Coatings and Engineering Repair materials for the Main, Chemical, Water, Power Oil & Gas Industries.



Our highly trained staff has many years of experience in the coatings industry and we are able to offer expert technical advise onsite or online 24 hours a day, 7 days a week.

Contact us directly by email, telephone or by visiting our website.

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With over 50 Distributors worldwide we are able to offer fast and effective solutions in many of the worlds major industrial areas.



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