

ProTXcoat 100MRP

Two Component Epoxy Engineering Repair Compound

100MRP is a high performance multi-purpose synthetic metal repair compound specifically developed for metal repairs requiring good mechanical strength combined with easy machining properties.

100MRP is formulated on a complex range of epoxy resins combined with a polyamino curing system reinforced with a phosphor steel alloy to enhance the corrosion and chemical resistance of the whole system.

100MRP can be applied to any damaged component in one easy application and is ideal for repairing worn shafts, oversized bearing housings, cracked cases and blocks, damaged flanges, sloppy keyways and scored rams.

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 be removed using MEK (Methyl Ethyl Ketone)

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 metal surfaces. Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs.

For the best results abrasive blast clean all surfaces to a minimum Sa2½ to Sa3 with a blast profile of 75 - 125 microns

Surfaces should finally be carefully degreased using MEK. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, MEK 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 **100MRP** must be coated with **Release Agent** prior to application of the **100MRP**

MIXING

100MRP is a two component solvent free material comprising base and activator components which must be mixed together prior to use.

Measure 3 volumes of base component and 1 volume activator component onto a clean mixing board or other suitable surface. The two components should then be thoroughly mixed until completely streak free.

The mixed material should be used within 25 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 pressed firmly onto the prepared area, working the material into any cracks and surface defects.

When **100MRP** is being used to bond two surfaces together, both surfaces should be coated with the material. The two pieces should then be pressed firmly together and clamped in position until the product has set, any excess material squeezed out should be scraped away before the **100MRP** begins to cure.

When **Reinforcing Tape** is being used to strengthen the repairs the tape should either be impregnated with **100MRP** or the tape should be layed over the **100MRP** surface and stippled into the material before it cures, then additional **100MRP** applied over the surface.

Once **100MRP** has reached 'initial set' the material can be separated from the surfaces treated with **Release Agent**.

Once **100MRP** has cured for a minimum of 2 hours at 20°C (68°F), sanding, grinding and machining etc. can be carried out using standard engineering practice.

When machining **100MRP** a typical Lathe set up would be:

Surface Cutting Speed	200
ft/minute	
Feed Rate (roughing)	50 thou/rev
(finishing)	10 thou/rev

All equipment must be cleaned IMMEDIATELY after use, with **MEK**.

Volume Capacity

410cc (25cu ins) per kilo

Detailed working recommendations are available from the Technical Centre on request.

PHYSICAL CONSTANTS

Mixing Ratio	Base	Activator	
	3	1	ByVolume
	5	1	ByWeight

Appearance	Base	GreyPaste
	Activator	Light GreyPaste

Drying & Cure Times at 20°C(68°F)	UsableLife	25 minutes
	InitialSet	60 minutes
	Machining	2hours
	FullMechanical	3 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).

Temperature Resistance

Dry Heat **200°C**
Intermittent wet **120°C**
Wet immersion **70°C**

Food Contact Meets USDA requirements for incidental food contact. Meets FDA requirements CFR 21.175.300 for food contact.
Canadian Food Inspection Agency - Accepted Product.

PHYSICAL PROPERTIES

Compressive Strength ASTM D 695	1090kg/cm ² (15500 psi)
Corrosion Resistance hours ASTM B117	5000
Flexural Strength ASTM D 790	700kg/cm ² (10000 psi)
Hardness (Rockwell R) ASTM D785	100
Heat Distortion ASTM D648 (Post Cured 24 hrs at 100°C/212°F)	90°C (195°F)
Nuclear Decontamination BS4247 Part 1	Excellent
Tensile Shear Adhesion ASTM D1002 (Grit Blasted Steel)	175kg/cm ² (2500 psi)

HEALTH AND SAFETY

As long as normal good practice is observed **100MRP** can be safely used.

Protective gloves should be worn during use.

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

PACKAGING

Supplied in 1kg, 3kg and 30kg packs

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests.



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