

## METAL-TECH R.G.

### Two Component Polyurethane Engineering Repair Compound



**Thortex Metal-Tech R.G.** is a high performance rapid curing metal engineering grade repair compound specifically developed for rapid turn round of metal repairs where excellent mechanical strength and easy machining properties are required.

**Thortex Metal-Tech R.G.** is formulated on a complex blend of polyether and polyester urethane resins combined with a polyamine catalyst curing system reinforced with a phosphor steel alloy which enhances the corrosion and chemical resistance of the whole system.

**Thortex Metal-Tech R.G.** can be applied to any damaged metal component as well as glass, fibreglass and composites and is ideal for rapid repairs to pipes, tanks, radiators, threads, sumps, casings and ducting.

**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 **Thortex 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 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.

Surfaces should finally be carefully degreased using **Thortex Universal Cleaner**. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, **Thortex Universal 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 **Thortex Metal-Tech R.G.** must be coated with **Thortex Release Agent** prior to application of the **Thortex Metal-Tech R.G.**

### MIXING

**Thortex Metal-Tech R.G.** is a two component solvent free material comprising base and activator components which must be mixed together prior to use.

Measure 1 volume 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 3 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

### APPLICATION

Prepared surfaced should be clean and dry. The mixed material should be pressed firmly onto the prepared area, working the material into any cracks and surface defects.

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

Once the **Thortex Metal-Tech R.G.** has reached 'initial set' the material can be separated from the surfaces treated with **Thortex Release Agent**.

When **Thortex Metal-Tech R.G.** is being used to repair leaking pipes, the flow through the pipe should be turned off until the repair is finished. Any leaking liquid must be wiped off the surface to ensure the surface is completely clean and dry before application commences.

All equipment must be cleaned IMMEDIATELY after use, with **Thortex Universal Cleaner**.

#### Volume Capacity

570cc (34.7cu ins) per kilo

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

## PHYSICAL CONSTANTS

<b>Mixing Ratio</b>	Base	Activator	
	1	1	By Volume
	4	3	By Weight

<b>Appearance</b>	Base	Black Paste
	Activator	White Paste

#### Drying & Cure Times at

<b>20°C (68°F)</b>	Usable Life	3 minutes
	Initial Set	10 minutes
	Machining	30 minutes
	Full Mechanical	2 hours

**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).

**Food Contact** Meets FDA Requirements CFR 21.175.300 for food contact.

## PHYSICAL PROPERTIES

<b>Flexural Strength</b> ASTM D790	500 kg/cm <sup>2</sup> (7100 psi)
<b>Compressive Strength</b> ASTM D695	860 kg/cm <sup>2</sup> (12200 psi)
<b>Tensile Shear Adhesion</b> ASTM D1002	175 kg/cm <sup>2</sup> (2500 psi) Grit Blasted Steel
<b>Heat Distortion</b> ASTM D648	52°C (125°F)
<b>Hardness (Shore D)</b> ASTM D2246	80
<b>Corrosion Resistance</b> ASTM B117	5,000 hrs

## HEALTH AND SAFETY

As long as normal good practice is observed **Thortex Metal-Tech R.G.** can be safely used.

The wearing of rubber gloves is advisable during use.

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

## PACKAGING

Supplied in 0.175kg and 0.125kg 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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FOR FURTHER INFORMATION PLEASE CONTACT