

GRANO-TECH

Three Component Solvent Free Epoxy Mortar



Thortex Grano-Tech is a high performance mortar designed for use as a heavy duty repair system for concrete and mineral surfaces.

Thortex Grano-Tech is based on a blend of solvent free epoxy resins and polyamino amine adducts reinforced with a special blend of silica quartz minerals and inorganic fillers which have been specially selected to provide optimum application and performance properties together with a high level of adhesion, abrasion, impact and chemical resistance.

Thortex Grano-Tech is a unique repair system, easy to apply by trowel or float with no shrinkage or volume change during cure and is ideal for the repair of damaged concrete, sills, lintels, steps, ramps, walkways and loading bays.

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

SURFACE PREPARATION

Surfaces to be repaired with **Thortex Grano-Tech** must be clean, dry and free from contamination.

Old concrete surfaces must be thoroughly cleaned with a detergent solution and then washed with clean water and allowed to dry.

New concrete surfaces will generally have laitence on the surface and this must be removed by mechanical means.

All existing coatings must be removed from the surface before any repair is carried out. Failure to do this will mean the **Thortex Grano-Tech** bond is only as good as the existing coating.

Thorough cleaning and roughening of any surface to which **Thortex Grano-Tech** is being applied is absolutely essential for a successful repair.

Abrasion of surfaces will cause dusting and therefore all loose dust should be vacuumed clear before the application commences.

PRIMING

To obtain maximum penetration and adhesion, the repair area should always be primed with **Thortex Grano-Tech Primer**. **Thortex Grano-Tech Primer** consists of a base component and an activator component. The contents of the activator component should be added to the base unit. Mix thoroughly to produce a uniform material. If only small quantities are required then the **Thortex Grano-Tech Primer** can be mixed in the ratio 2 parts base to 1 part activator.

The mixed primer should be applied immediately using a stiff bristle brush, working the material into the prepared surface to obtain maximum penetration. **Thortex Grano-Tech Primer** will generally apply at coverage rate of 0.37m² (4ft²) per 100 gms of primer.

Thortex Grano-Tech Primer must be used as a tack coat and should not be allowed to dry - any areas of primer which have been allowed to dry should be reprimed for optimum results.

MIXING

Thortex Grano-Tech is a three component material comprising a base component, activator component and aggregate.

The aggregate component should be removed from the plastic container. The base and activator components should be emptied into this container and mixed thoroughly to produce a uniform material.

The **Thortex Grano-Tech** aggregate should immediately be added to the base and activator mix until the desired consistency is achieved. For bonding and grouting applications approximately two thirds of the aggregate should be added.

For resurfacing and general repairs, all the aggregate should be added. The complete material should be mixed thoroughly for 2-3 minutes to produce a uniform material. Prolonged hand mixing or mixing by mechanical mixer will produce a wetter mix.

If only small quantities are required the **Thortex Grano-Tech** base and activator can be mixed in the ratio of 2 parts base to 1 part activator, with the appropriate quantity of aggregate.

The mixed material should be used within 70 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

APPLICATION

The mixed **Thortex Grano-Tech** should be applied to the primed area by float or trowel. The material should be spread firmly and evenly onto the surface and then smoothed over with a steel trowel or float.

On horizontal surfaces **Thortex Grano-Tech** can be applied to virtually any thickness. A thickness of 6 mm (0.25 inches) is recommended.

On vertical surfaces, the maximum thickness which can be achieved without sagging is 12.5 mm (0.5 inches). An application thickness of 6 mm (0.25 inches) is recommended.

When applied at 6 mm (0.25 inches) **Thortex Grano-Tech** will provide a coverage rate of 0.37 m² (4 ft²) per 5 kg unit. **Thortex Grano-Tech** cannot be readily applied to overhead surfaces without the use of shuttering. Where applications to overhead surfaces are being considered, customers should consult the **Thortex Technical Service Department**.

NOTE: The minimum temperature of application is 5°C (50°F).

On certain repairs there may be adjacent areas where **Thortex Grano-Tech** is not required to bond. By applying **Thortex Release Agent** to these surfaces, before the **Thortex Grano-Tech** is applied, then after curing, a simple release can be achieved.

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

Volume Capacity

450 cc (29 cu ins) per kilo.

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

PHYSICAL CONSTANTS

Mixing Ratio	Mix as supplied.	
Appearance	Primer Base	Clear Pale Straw Liquid
	Primer	Clear Amber Liquid
	Activator	
	Base	Clear Pale Straw Liquid
	Activator	Clear Amber Liquid
	Aggregate	Coloured Granular Powder

Drying & Cure Times at 20°C (68°F)

Grano-Tech Primer	
Usable Life	30 minutes
Maximum Overcoating	3 1/2 hours

Grano-Tech	
Usable Life	70 minutes
Foot Traffic	8 hours
Full Hardness	24 hours
Maximum Overcoating	24 hours
Full Cure	7 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).

Food Contact Meets USDA requirements for incidental food contact.
Meets FDA Requirements CFR 21.175.300 for food contact.

PHYSICAL PROPERTIES

Abrasion Resistance ASTM D4060	145 mgm weight loss per 1000 cycles - 1 kg load - CS17 Wheel
Impact Resistance ASTMD256	1.8 Joules (16 in lbs)
Direct Pull Adhesion ASTM D4541	35 kg/cm ² (500 psi) - concrete (Concrete Failure)
Compressive Strength ASTMD695	880 kg/cm ² (12500 psi)
Flexural Strength ASTMD790	490 kg/cm ² (7000 psi)
Shrinkage ASTMC246	Nil

HEALTH AND SAFETY

As long as normal good practice is observed **Thortex Grano-Tech** 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 5 kg and 15 kg 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.

FOR FURTHER INFORMATION PLEASE CONTACT



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