



MANORTEQ

Completing the Waterproofing

AquaRend Thix Regular

TECHNICAL DATA SHEET

Manorteq AquaRend Thix Regular is a single-component, dry mortar mix designed specifically for structural repair, waterproofing, patching and resurfacing of deteriorated concrete and masonry structures/surfaces.

The product has excellent waterproofing capabilities, provided by the Xypex Technology Inside.

Description

Manorteq AquaRend Thix Regular is the most versatile product within the range and can be used as either a render or a screed. The product can hold its own weight, making vertical applications possible.

It can also be used on a horizontal surface as a screed, although the Manorteq AquaRend Flow range is sometimes more suitable where a flowable version is required. (See Manorteq AquaRend Flow products)

Manorteq AquaRend Thix Regular is classified as an R3 mortar with a low modulus of elasticity in accordance with EN 1504-3.

Benefits include:

- Waterproof; and tested up to 5 bar/50 m hydrostatic head (EN 12390-8)
- Structural repair mortar classified as R3 (EN 1504-3)
- Applied manually or by wet spraying
- Good adhesion to base with excellent mechanical properties
- Limited shrinkage
- Includes Xypex Technology Inside
- Freeze-thaw resistant
- High chemical resistance
- Seals the concrete surface from water, oils, organic solvents, etc.





Use

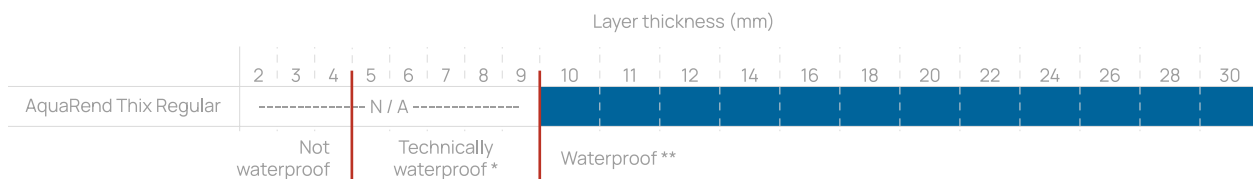
Manorteq AquaRend Thix Regular is the most versatile product within the range and can be used as either a render or a screed. The product can hold its own weight, making vertical applications possible. It can also be used on a horizontal surface as a screed, though Manorteq the AquaRend Flow range is sometimes more suitable where a flowable version is required. (See Manorteq AquaRend Flow products)

Manorteq AquaRend Thix Regular can be used on its own to waterproof and repair a substrate. Alternatively, it can be used in combination with another product within the Manorteq AquaRend range. (Such as Manorteq AquaRend Thix Fine or Manorteq S-Fine if a smoother finish is required)

Where enhanced bond is required, or where water ingress is from the negative side, either Manorteq AquaRend Fix-S or Manorteq AquaRend Fix-B should be considered.

Manorteq AquaRend Thix Regular is classified as an R3 mortar with a low modulus of elasticity in accordance with EN 1504-3.

Waterproofing Capability



* Whilst a perfect application at these thicknesses will provide a waterproof layer, there is however a higher probability of imperfections in the application which would compromise the integrity of the waterproofing.

** Waterproof, subject to correct application. All Manorteq products should be applied in strict accordance with the installation procedures.





Technical Data

Requirements/Results according to EN 1504-3 class R3

	Testing Method	Requirements	Results
Compressive strength (MPa)	EN 12190	> 25	> 35
Contents of chloride ions (%)	EN 1015-7	< 0.05	< 0.03
Cohesion (MPa)	EN 1542	> 1.5	> 1.7
Carbonation resistance	EN 13295	$d_k \leq$ Concrete sample	Suitable
Elasticity modulus in compression (GPa)	EN 13412	≥ 15	> 20
Thermal compatibility – dry cycles – adhesion to base (MPa)	EN 13687-4	≥ 1.5	> 1.7
Capillary absorption ($\text{kg}\cdot\text{m}^{-2}\cdot\text{h}^{-0.5}$)	EN 13057	≤ 0.5	< 0.2

Physical and Mechanical Properties

Resistance to pressurised water	Waterproof	0.5 MPa (50 m hydrostatic head) in accordance with EN 12390-8 (Depth of penetration of water under pressure)
Colour		Non-standard grey
Tensile bending strength (MPa)	7 days	> 4.5
	28 days	> 7
Compressive strength (MPa)	7 days	> 20
	28 days	> 35
Frost resistance		T100 (Freeze/Thaw Cycles with Water)





Installation

Substrate

1. Remove all damaged, loose and weather-worn concrete. Any dust and loose particles shall be removed from the substrate before application. The concrete surface must not be contaminated by substances which can negatively affect the adhesion of the mortar to the substrate (e.g. oil or other products).
2. Corroded reinforcement should be repaired where necessary to the satisfaction of the resident engineer.
3. Before the application of Manorteq AquaRend Thix Regular, ensure the substrate surface is suitable to receive the mortar and create a suitable cohesive bond. If the surface is not suitable, consider the use of Manorteq AquaRend Fix-B or Fix-S or prepare the surface to create a bond.
4. Before the application of Manorteq AquaRend Thix Regular, the substrate must be wetted, ideally to a 'saturated surface dry' condition. Rinsing with pressurised clean water before application is recommended to remove any dust from the application surface.

Preparation for Manual Application

1. Manorteq AquaRend Thix Regular is prepared by mixing with clean water. It is necessary to thoroughly mix with enough speed/energy to comprehensively combine the material, but care should be taken not to incorporate air into the mix. Speed/energy should be reduced as material becomes more fluid.
2. Recommended mixing ratio is 3.50 - 4.00 litres of clean water* per 1 No. (25 kg) bag of product.
3. If the water exceeds the recommended quantity, risk of cracking, and a reduction in waterproofing performance, is significantly enhanced.
4. Initially mix the dry mix into the minimum water for approximately 5 minutes, let it rest for three minutes and mix again, until it becomes more fluid. Mix at slow speeds, too much speed will add unwanted air into the mix. If this is not the appropriate consistency, add water in small increments, mix again and assess. Add up to the maximum allowable, ensuring to complete the full mixing, resting and re-mixing process.
5. Working time of the product is typically 50 - 60 minutes at 20 °C.
6. The temperature of ambient air shall not be below, nor expect, in the following 24 hours, to fall below +3°C or be, or expect to be, above +35 °C.
Never apply to frozen substrates.

Preparation for Spray Application

1. Manorteq AquaRend Thix Regular is prepared by mixing with clean water. It is necessary to thoroughly mix with enough speed/energy to comprehensively combine the material, but care should be taken not to incorporate air into the mix. Speed/energy should be reduced as material becomes more fluid.
2. Recommended mixing ratio is 3.50 - 4.00 litres of clean water* per 1 No. (25 kg) bag of product.
3. If the water exceeds the recommended quantity, risk of cracking, and a reduction in waterproofing performance, is significantly enhanced.





4. Initially mix the dry mix into the minimum water for a minimum of 5 minutes, checking its consistency before it is discharged.

If this is not the appropriate consistency, initially mix a little longer, if it is still not acceptable, add water in small increments, mix again and assess. Add up to the maximum water allowable.

5. Working time of the product is typically 50 - 60 minutes at 20 °C.

6. The temperature of ambient air shall not be below, nor expect to be, in the following 24 hours, +3°C or be, or expect to be, above +35 °C.

Never apply to frozen substrates.

* Consideration should always be given to the amount of water used. As a waterproof mortar there is always a balance between the level required. Less water will give greater waterproofing, but more water is typically required for application purposes.

Application

1. Manorteq AquaRend Thix Regular can be applied either manually or by wet spraying. Layers must not exceed 30 mm thickness.
2. The first layer needs to be applied in such a way as to ensure that no voids are created (e.g. behind reinforcement). After the initial application it is recommended to spread the mortar into pores and uneven spaces. This can be best achieved with a flat paint brush (with short hair), or a toothed trowel.
3. Proper adhesion of the material to the substrate in the application stages is of fundamental importance.
4. With localised areas it is necessary to pay detailed attention to the edges of areas previously repaired. It is imperative to ensure product is sufficiently compacted, eliminating any entrapped air pockets or other irregularities.
5. The repair should always commence from the deepest part of the defective area, layering the product up in such a way that when the final layer is applied, it is a continuous, homogenous layer over the entire area being repaired.
6. After initial set of the last layer, a dry polyurethane finishing tool is used for the smoothing of the surface.
7. Wet surface finishing is not allowed. If a finer finish is required use Manorteq AquaRend Thix Fine or Manorteq AquaRend S-Fine.
8. When a further layer is to be applied, the surface must be left ready to create a good bond with the next layer and not be smoothed.

Curing

Attention should be taken to avoid direct exposure to the sun, wind and other factors which accelerate evaporation and have a detrimental effect. Proper curing must be undertaken to prevent early drying, and the subsequent issues associated. Manorteq Curing Agent can be used to aid this process. Repaired surfaces must be properly cured immediately after completion.





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Consumption

Specific consumption of dry mortar is 1.70 - 1.80 kg/m²/1 mm of layer thickness. In spray application, it is necessary to account for approximately 10 - 12% loss of material.

Packaging

The product is supplied in 25 kg bags.

Storage

Manorteq cementitious products must be protected during transportation and storage against moisture. The product should be used within its shelf life for optimum technical performance, which is 12 months from date of manufacture when stored under proper conditions.

Handling and Health & Safety

Manorteq cementitious products are alkaline. As a cementitious powder or mixture, Manorteq AquaRend Thix Regular may cause significant skin and eye irritation. Directions for treating these problems are clearly detailed on all Manorteq cementitious packaging. The manufacturer also maintains comprehensive and up-to-date Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of workers and customers. The manufacturer recommends you contact Manorteq Ltd or your local Manorteq representative to obtain the latest copies of Safety Data Sheets which must be read prior to product storage or use.

Warranty

Manorteq Limited (Company No. 13817118) warrants to the purchaser that the products supplied by it shall be free from material defect. Should any of the products be proven defective, the liability to Manorteq Limited shall be limited to (at the choice of Manorteq Limited) either replacement of the proven defective products ex-factory, or refund of the NETT ex-factory purchase price at the date the proven defective products were supplied. Manorteq Limited will not be liable or responsible, to such an extent as permitted by law, for any consequential or direct damages, compensation, costs, expenses, losses or other liabilities that may occur as a result of the defective products. Manorteq Limited makes no warranty as to the merchantability or fitness for a particular purpose and the terms of this warranty are in lieu of all other warranties expressed or implied by law.

Please note: This Technical Data Sheet is for general guidance only. It does not constitute as a detailed guide for a specific application. Due to the unique circumstances of every site, each installation must be assessed on a project-by-project basis as there may be many variables to consider. Independent professional advice should be sought on each installation. The information contained within this Technical Data Sheet is to the best of Manorteq Limited's knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness.

