



MANORTEQ

Completing the Waterproofing

AquaRend Flow Regular

TECHNICAL DATA SHEET

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

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

Description

Manorteq AquaRend Flow Regular is for horizontal level surface applications only. For vertical, sloping or overhead surfaces please see the Manorteq AquaRend Thix range.

Manorteq AquaRend Flow 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 by pouring or pumping
- 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 Flow Regular is a single-component, dry mortar mix designed specifically for waterproofing, patching and resurfacing of deteriorated concrete and masonry structures.

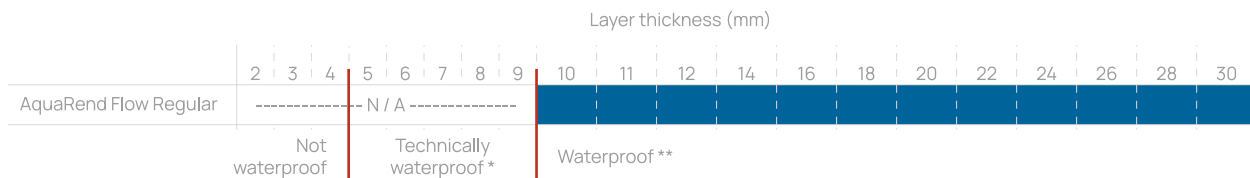
Manorteq AquaRend Flow Regular is for horizontal surface applications only. For vertical, sloping or overhead surfaces please see the Manorteq AquaRend Thix range.

Manorteq AquaRend Flow Regular can be used on its own, or in combination with a secondary layer. Depending on the finish required, either Manorteq AquaRend Thix Fine or Manorteq AquaRend S-Fine are compatible with Manorteq AquaRend Flow Regular.

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.

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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	> 30
Contents of chloride ions (%)	EN 1015-7	< 0.05	< 0.03
Cohesion (MPa)	EN 1542	> 1.5	> 1.8
Carbonation resistance	EN 13295	$d_k \leq$ Concrete Sample	Satisfactory
Elasticity modulus in compression (GPa)	EN 13412	≥ 15	> 18
Thermal compatibility – dry cycles – adhesion to base (MPa)	EN 12617-4	≥ 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	> 6.5	
Compressive strength (MPa)	7 days	> 23	
	28 days	> 30	
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 Flow 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 Flow 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 Flow 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.

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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 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 Flow Regular can be applied by pouring or pumping. Layers must not exceed 30 mm thickness.
2. After initial set of the last layer, a dry polyurethane finishing tool is used for the smoothing of the surface.
3. Wet surface finishing is not allowed.

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.

Consumption

Specific consumption of dry mortar is 1.80 - 1.90 kg/m²/1 mm of layer thickness.

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.





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Handling and Health & Safety

Manorteq cementitious products are alkaline. As a cementitious powder or mixture, Manorteq AquaRend Flow 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.

