



MANORTEQ

Completing the Waterproofing

AquaRend Flow

TECHNICAL DATA SHEET

Manorteq AquaRend Flow is a single-component, dry mortar mix designed specifically for waterproofing, patching and resurfacing of deteriorated concrete and masonry structures. The product has excellent waterproofing capabilities, provided by the Xypex Technology Inside.

Description

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

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

Benefits include:

- Applied manually or by dry spraying
- Good adhesion to base with excellent mechanical properties
- Limited shrinkage
- Includes Xypex Technology Inside
- Waterproof; and tested up to 5 bar / 50 m hydrostatic head (limit of test)
- Freeze-thaw resistant
- High chemical resistance
- Seals the concrete surface from water, oils, organic solvents, etc.





Use

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

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

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

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

		Layer thickness (mm)																				
		2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	22	24	26	28	30	
AquaRend Flow		-----				N / A -----																
		Not waterproof				Technically waterproof *					Waterproof **											

* 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 ($\text{kg.m}^{-2}.\text{h}^{-0.5}$)	EN 13057	≤ 0.5	< 0.2

Physical and Mechanical Properties

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, 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, the substrate must be wetted so that the surface ideally should be saturated surface dry. Rinsing with pressurised clean water before application is recommended to remove any dust from the application surface.

Preparation

1. Manorteq AquaRend Flow is prepared by mixing with clean water. It is necessary to use a low-speed mixer with forced circulation.
2. Recommended mixing ratio is 3.35 - 3.65 litres of clean water* per 1 No. (25 kg) bag of product.
3. Initially mix the minimum water into dry mix for approximately 5 minutes, let it rest for a couple of minutes and mix again. It will become more fluid. If this is not the appropriate consistency, add water in small increments, mix again and assess. Add up to the maximum allowable mixing, resting and mixing.
4. If the water exceeds the recommended quantity, risk of cracking is significantly enhanced.
5. Working time of the product is typically 50 - 60 minutes at 20 °C.
6. Neither the temperature of substrate, nor the temperature of the ambient air, shall be below +5 °C or above +30 °C.

* 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 can be applied manually. Layers must not exceed 30 mm thickness.
2. After initial set of the last layer, a dry polyurethane finisher is used for the smoothing of the surface.
3. Wet surface finishing is not allowed.





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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. Curing agents 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 PE lined paper bags.

Storage

Manorteq cementitious products must be stored dry at a minimum temperature of 7 °C. The product should be used within its shelf life for optimum technical performance, which is 6 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 Flow 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.

