MC-Proof 600 Xtra

APPLICATION ADVICE

Application Instructions For Use as a Structure Substrate Waterproofing System

Planning: Before any waterproofing measure, it is essential that the type of water exposure (water impact class) be ascertained. For this purpose, the soil type, the terrain and the design water level will need to be determined.

Substrate Preparation: All mineral substrates, dry or slightly damp, are suitable for coating with the MC-Proof 600 Xtra system. The component surface temperature and ambient temperature will, however, need to be more than + 5 °C. The surfaces to be waterproofed must be clean, stable, frost-free, level, and free of gaping cracks, ridges and adhesion-diminishing substances.

Masonry that is not fully jointed will need to be remedied in advance. Small areas of unevenness ≤ 5 mm must be sealed with a filler or scratch coat of MC-Proof 600 Xtra. Note, however, that this does not constitute a waterproofing layer. Rough areas of unevenness > 5 mm must be levelled with a mineral filler (e.g. Nafuquick). External edges must be chamfered. Internal corners and wall-to-floor junctions can be jointed and sealed by means of a mineral fillet. For an even faster wall-to-floor jointing option, we recommend using the MC-FastTape system.

Application of MC-Proof 600 Xtra to the Substrate: MC-Proof 600 Xtra should be applied to the pre-treated substrate by trowelling or spraying in two stages, ensuring that the resultant two-coat layer is cohesive with intimate adhesion to the substrate.

Layer Thicknesses: The specified minimum dry thicknesses will depend on the water impact class involved. The requisite wet layer thicknesses in each case are documented in the technical data sheets. It must be ensured that the minimum dry layer thicknesses are maintained or exceeded in all areas and that the wet layer thicknesses are not exceeded by more than 100 % at any point. When calculating the layer thicknesses, make sure that you add the allowance specified in DIN 18533.

Reinforcing Inlay: Nafuflex Grid 25 NF mesh will need to be embedded between the first and second layer of MC-Proof 600 Xtra where required for the water impact class.

Joints: Construction and movement / expansion joints should be sealed with flexible joint tapes of the MC-FastTape product range.

Work Interruptions: If the waterproofing work is interrupted, you will need to taper the MC-Proof 600 Xtra layer down to zero thickness. On resumption, the coating work can then continue with an overlap. Make sure that there are no interruptions when coating corners, fillets or edges.

Floor Slab-to-Wall Junction: To prevent rising damp / possible moisture penetration from the rear, we recommend applying the rigid sealing slurry MC-Proof 101 HS before forming the fillet at the junction between the floor slab and the wall. The surface waterproofing layer is then applied horizontally from the wall area over the floor slab and at least 100 mm vertically down over the face of the floor slab.

Water Impact Class W1.1-E: Ground moisture and water acting without hydrostatic pressure on floor slabs
Water Impact Class W1.2-E: Ground moisture and water acting without hydrostatic pressure on floor slabs and buried walls, with drainage: This type of waterproofing may be used if the construction site and also the backfill material of the build consist of highly permeable soils (k > 10-4 m/s), such as coarse sand or gravel, or where drainage is provided in accordance with DIN 4095 on sites where the soil is not very permeable (k ≤ 10-4 m/s), such as is the case with fine sand, clay or loam. In areas where stress can be

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particularly high (e.g. fillets, corners, edges, penetrations), we recommend inserting a reinforcing mesh inlay (Nafuflex Grid 25 NF) between the first and second layer of MC-Proof 600 Xtra.

Penetrations are sealed by applying MC-Proof 600 Xtra to the junction in the form of a fillet. The reinforcing inlay will need to be embedded in the first, fresh layer of MC-Proof 600 Xtra. Ensure compliance with a minimum horizontal embedment length of the reinforcing inlay of 10 cm within the extended surface coating of sealant.

Water Impact Class W2.1-E: Moderate water pressure action: MC-Proof 600 Xtra may be applied in cases of moderate exposure to pressurised water where the hydrostatic pressure acting on the waterproofing membrane is 3 m or less.
It is important to make sure that the first layer of MC-Proof 600 Xtra is not damaged when applying the second layer. Drainage is not necessary. Penetrations should be provided in the form of an adhesive flange, a service entry system or a fixed and floating flange assembly.

Water Impact Class W3-E: Water without hydrostatic pressure acting on buried suspended slabs: The waterproofing of a buried suspended slab / earth-covered roof or ceiling must be designed so that the lowest point of the slab surface is at least 30 cm above the design water level. The depth of water accumulation on the slab surface must not exceed 10 cm. Junctions at penetrations are sealed by applying MC-Proof 600 Xtra with a reinforcing inlay to adhesive flanges or by means of a fixed and floating flange assembly.

Water Impact Class W4-E: Splash water acting on plinths, and capillary water in and below buried walls: When sealing a splash water plinth with MC-Proof 600 Xtra, you will need to extend the waterproofing coating / membrane to a point 300 mm above ground level. In the final state after landscaping, the height above ground level must still be at least 150 mm.

Junction between wall waterproofing membrane and floor slab of waterproof concrete: For waterproofing against water under moderate hydrostatic pressure (W2.1-E), the substrate must be prepared mechanically, e.g. by grinding, blasting or milling, in such a way that it is free from adhesion-reducing substances, contamination and loose components. Edges must be chamfered and fillets must be radiused / rounded. The waterproofing membrane must be extended at least 150 mm down the vertical face of the floor slab. If the waterproofing work is not carried out immediately after the pre-treatment work, the substrate must be checked again for contamination before applying the sealant layers. Any such contamination will need to be removed.

Checking for Layer Thickness and Full Dryness: Wet layer thickness control is performed by checking the consumption of MC-Proof 600 Xtra per m² of area being waterproofed and measuring the layer thickness of the freshly applied material (20 measurements per 100 m² or per component). The measuring point density will need to be increased in the area of penetrations, transitions, junctions, connections and fillets. In multi-layer waterproofing systems, each layer will need to be checked and measured. All results must be recorded.

To check for full dryness, a reference specimen is subjected to appropriate destructive testing. The specimen shall correspond to the component substrate being sealed and shall be stored in the excavation pit.

Application Instructions for Use as an OS 5b Grade Surface Protection System

Substrate Preparation: All concrete surfaces that are to be coated must be tested for load-bearing capacity before starting work. They must be free of all loose material, dust, oil and other separating or adhesion-diminishing substances. Cement slurry at the surface should also be removed. Porosities and blowholes should be fully exposed. The surface tensile strength values of the substrate must comply with relevant technical specifications and standards. If large pores, blowholes and rough depressions are present, a scratch filler should be applied with a rigid fine filler before applying the primer / base filler.

To maintain the layer thickness, fillets must be formed in inside corners and similar profiles with angles < 140° C.

Application Conditions: The application time for MC-Proof 600 Xtra will depend on prevailing climatic / ambient conditions. Material that has already started to set should not be further stirred or applied. The freshly mixed material must be protected from direct sunlight and the minimum application temperature (substrate and air) of +5 °C must be adhered to.

Any drop in temperature below this minimum during the first couple of hours after application must be avoided at all costs. At the same time, the coating must be protected against frost within the first 24 hours

Layer Thicknesses: With a standard system structure comprising base filler and coating, a theoretical dry layer thickness of 2 mm is achieved under normal ambient conditions. Further layers may be applied, provided that this does not result in the maximum total layer thickness being exceeded.

Further Information: Since, in order to achieve the target product properties, a physical film-formation / drying phase must be allowed to occur in addition to the chemical curing / cross-linking process, the climatic limit values specified in the technical product data sheet must be observed not only during application, but also during the film-formation / drying phase, i.e. over a period of at least 1-2 days. Moisture loads arising during the chemical / physical reaction phases, e.g. due to dew and rain or strongly fluctuating climatic conditions, extend the time span of these reaction phases and should therefore be avoided.

MC-Proof 600 Xtra – Overview of Consumption and Related Data

Area of application	Consumption (kg/m²)	Wet layer thickness (mm)	Dry layer thicknesses (mm)
Surface protection system			
Substrate primer / base filler	0.5- 0.7*	-	-
Coating	3.0		2.0
Construction waterproofing			
Scratch coat	0.5 - 1.2*		
Waterproofing membrane for water impact classes W1-E and W4-E acc. to DIN 18533**	3.0	2.4	2.0
Waterproofing membrane for water impact classes W3-E and W2.1-E aligned to the requirements of DIN 18533***	6.0	4.8	4.0
Waterproofing membrane for water impact class W1-E on masonry aligned to the requirements of DIN 18533***	3.0	2.4	2.0
Waterproofing membrane for water impact class W1-B in accordance with DIN 18535	3.0	2.4	2.0
Waterproofing membrane for water impact class W2-B in accordance with DIN 18535	3.0	2.4	2.0
Waterproofing of joints in precast concrete components and waterproof concrete components (German code PG-FBB) / Waterproofing at junctions with waterproof concrete components (German code PG-ÜBB)	6.0	4.8	4.0

* Dependant on the roughness and levelness of the substrate
** On concrete substrates only
*** Special agreement required
The above empirical and laboratory data are non-binding and have been provided for guidance only. Deviations may occur, depending on actual substrate condition and application technique. Compliance with the layer thickness allowances stipulated in DIN 18533 and DIN 18535 must be strictly ensured.

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