

WATERPROOFING OF BASEMENTS

THE PROBLEM

Moisture problems in basements, due to underground water level or rain water, are a common phenomenon. The solution to such problems should be permanent because afterwards, reparation to basements is difficult and expensive. Therefore, it is required a careful selection and application of the right materials. Further down there are presented the waterproofing of basements carried out during construction of the building and the waterproofing of basements after construction (internally).

● WATERPROOFING OF BASEMENTS CARRIED OUT DURING CONSTRUCTION OF THE BUILDING



To reinforced concrete it is added **PLASTIPROOF**, a plasticizer, type A concrete waterproofing admixture.



The substrate should be thoroughly cleaned from any possible formwork oil residues, loose particles, dust etc.



Externally, any cavities in the concrete should be cleaned from loose particles, aggregates etc. Form wires and distance pieces should be cut at a 3 cm depth. Any working joints should be widened in a V-shape along their length, at a depth of 3 cm. The surface of the above areas should be thoroughly dampened and filled with **DUROCRET** polymer modified cement mortar.



Depending on the water pressure, 2-4 layers of **AQUAMAT** are applied onto the external walls of the basement after dampening. The coating surface must extend at least 50 cm above the ground level. Each layer must be fully dry before the next one is applied. To avoid cracking, each layer should not be thicker than 1 mm.



Intersections of the floor with vertical elements (concrete walls, columns), should be dampened and sealed, along their entire length with **DUROCRET** (formation of a "groove"). 2-4 layers of **AQUAMAT** are applied onto the basement floor. The floor coating must extend on the concrete walls or columns at least 50 cm above the groove formed at the intersection with the floor. Each layer must be fully dry before the next one is applied.



MATERIALS

- **AQUAMAT** Cement-based brushable sealing slurry (consumption: 1 kg/m²/layer or total 2-4 kg/m²)
- **DUROCRET** Polymer-modified cement mortar (consumption: 2-3 kg per meter of groove)
- **PLASTIPROOF** Plasticizer, type A - Concrete waterproofing admixture (consumption: 1,5-1,8 kg/m³ of concrete)

WATERPROOFING OF BASEMENTS AFTER CONSTRUCTION (INTERNALLY).

This method of waterproofing can be used both to new constructions (in cases when external waterproofing is difficult to be accomplished), and to old constructions. In the case of old constructions, the waterproofing layers should be applied to surfaces that can stand the negative pressure of water (slab, walls of basement etc.). For that reason, plasters and tiles are removed. If prior to the application the basement is flooded, contact the technical department of ISOMAT in order to avoid mistakes or bad application.

Substrate should be thoroughly cleaned from any loose particles, dust etc.



Intersections of the floor with vertical elements (concrete walls, columns), should be dampened and sealed, along their entire length with **DUROCRET** polymer modified cement mortar (formation of a "groove").



Form wires and distance pieces should be cut at a 3 cm depth. Any working joints should be widened in a V-shape along their length, at a depth of 3 cm. The surface of the above areas should be thoroughly dampened and filled with **DUROCRET** polymer modified cement mortar. Also any cavities in the concrete should be filled with **DUROCRET**.



Leaking points are fixed with **AQUAFIX**, a rapid-setting cement for instant sealing of water leaks.



After thoroughly dampening, the walls of basements are coated with **AQUAMAT** on 2-4 layers, depending on the pressure of water. The layer must extend on the concrete walls or columns at least 50 cm above the groove formed at the intersection with the floor. Each layer must be fully dry before the next one is applied. To avoid cracking, each layer should not be thicker than 1 mm.



Finally, **AQUAMAT** is applied in the same way to the floor of basement.



With **AQUAMAT**, a uniform waterproofing layer is shaped in the basement internally. Afterwards, a layer of coat, plaster or tiles can be applied.

MATERIALS

- **AQUAMAT** Cement-based brushable sealing slurry (consumption: 1 kg/m²/layer or total 2-4 kg/m²)
- **DUROCRET** Polymer-modified cement mortar (consumption: 2-3 kg per meter of groove)
- **AQUAFIX** Rapid-setting cement for instant sealing of water leaks