

# HIDROMAL

*One component, rigid, cement based waterproofing  
In compliance with EN 1504-2:2.2 (C); 8.2 (C)*

## FILED OF APLICATION

Waterproofing for constructions exposed to positive and negative hydrostatic pressure, for indoor and outdoor waterproofing of underground concrete structures, wall and floor waterproofing in basements, pools, technical and drinking water reservoirs, ducts, manholes, toilettes, kitchens and similar. Also it is used in repairing systems, for buildings without waterproofing or with damaged waterproofing system. Combined with Hidromal elastifikator it is used as rigid waterproofing with improved characteristics and bending resistance. Hidromal is compatible waterproofing with methacrylate and epoxy based systems produced by ADING.

## PROPERTIES

- simple preparation and application;
- concrete protection of water and moisture penetration;
- resistant to positive and negative hydrostatic pressure;
- ceramic tiles can be applied directly on the waterproofing, using tile adhesive;
- suitable for drinking water reservoirs;
- application on moisturized substrate;
- bacteriologically resistant;
- UV stable;
- resistant to ice;
- resistant to salts;
- does not contain chlorides;
- economical;
- non-toxic.

## TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	-	grey powder
Mixing ratio		Hidromal : water
application using brush	-	1:26-0,28
application using trowel		1:0,16-0,164
Bulk density of the product prepared for application	MKC EN 1015-6	2,05-2,27g/cm <sup>3</sup>
Consistency of fresh mix	MKC EN 1015-3	120-180mm
Compressive strength		
on 7 days		>5MPa
on 28 days		>35MPa
Adhesion to the substrate (Bond strength)	EN 1542	≥1,0MPa
Vapor-permeability	EN ISO 7783-1	Sd<5m - class I
Capillary absorption and water permeability	EN 1602-3	w<0,1kg/m <sup>2</sup> h <sup>1/2</sup>
Reaction to fire	EN 13501	A
Temperature for application		10°C-30°C
Pot life		3-4h
Dry at 20°C		
Forming dry layer of the surface		after 5h
Dry		after 24h

Apply next layer at 20°C	after 24h
Use	after 7 days

## METHOD FOR CONSTRUCTION

### SUBSTRATE PREPARATION

Substrate for waterproofing of Hidromal is cement mortar or concrete, 28 days old with compressive strength of 30MPa. The substrate should be sound, clean, solid and stable, without cracks, labile parts, existing coatings, grease or dust.

The application of the floor waterproofing should be executed on solid, stable and compact cement mortar substrate with slope.

For executing waterproofing on the construction joints (horizontal and vertical, floor and wall), it is highly recommended to perform curved element (holker) made of Reparatur Malter F or to place ADING self-adhesive tape to bridge the joints, in case of constructive movements.

According to the details and the potentials of the building, joints at concreting, penetrations of installations through the construction, penetrations of the formwork spacers and similar should be appropriate treated with Reparatur malter F, Adingpoks K, ADING self-adhesive tape or with elastic acrylate sealant Adingakril.

For reconstructions, remove all labile parts of the substrate and clean it from dirt and dust. When the construction has any segregation or cracks, it is recommended to repair them with Eksmal, Reparatur Malter F or Adingpoks K, according to the detail and the potentials of the building.

Before the application of Hidromal on warm and very dry substrate, it is obligatory to wet the surface with water, to prevent burnout of the material. Also it is recommended to prime the substrate with Vrska U, diluted with water, ratio 1:2-1:3 (Vrska U: water). Apply Hidromal while the primer is still wet. It is not allowed to apply Hidromal on dry primer because it will significantly influence the adhesion to the substrate.

### APPLICATION

Prepare the material with water: for application using brush mix Hidromal : water = 3.7:1.0 (270g/kg Hidromal) and for application using trowel mix Hidromal : water = 6.0:1.0 (164g/kg Hidromal). Then mix until it homogenize using mechanical mixer with medium speed (300-500 revolutions per minute). Leave the mixture 10-15min calm and mix it again right before the application.

Apply it in three layers. For the application of the first and the second layer use brush and for the third layer trowel. Apply the next layer on completely dry layer, in normal direction of 90°C to the previous. According to the temperature, the period of time between two layers should be between 6-24h. The total thickness of the layers is intended to be 2.5-3.5mm. The surface with Hidromal should be treated with water 3-4 times/day in period of 48h after the application. In case of high temperatures the surface must stay wet during this period. The surfaces exposed to direct sun must be covered with continuously wet textile or geotextile.

On flat and smooth substrates the first layer of Hidromal should be prepared with Vrska U diluted with water, ratio 4:1 (Vrska U: water) to improve the adhesion to the substrate.

Protect the surfaces of rain, snow, wind and freezing in period of 48h after the application. The temperature during the application should be between 10-35°C.

In case of mechanical damages of the waterproofing, the correction is simple, by overpainting the area.

Protect the underground surfaces waterproofed with Hidromal mechanically using protective membrane, expanded polystyrene or cement mortar. Protect the over ground surfaces of the building using geotextile, ceramic tiles, Adingfleks or other type of water based coating.

## CONSUMPTION

for three layers: 5-6kg/m<sup>2</sup> (two layers with brush and one layer with trowel)

## CLEANING

Tools and equipment should be cleaned with water, immediately after use.


## PACKING

paper bag: 5 and 25kg

## STORAGE

In original, closed packaging, in dry spaces, at temperature over 10°C, protected from direct exposure to sunlight. Shelf life: 12 months.

## CE MARK

 2032	
ADING AD Skopje, Novoselski pat (ul 1409) br.11 1060 Skopje, North Macedonia 17 GFAA001/5 EN 1504-2:2004	
<b>HIDROMAL</b> Rigid waterproofing, for surface protection of concrete and moisture control	
Permeability to water vapour	<b>Class I, <math>S_D &lt; 5</math> m</b>
Capillary absorption and permeability to water	<b><math>w &lt; 0,1 \text{ kg/m}^2 \cdot \text{h}^{0,5}</math></b>
Adhesion strength by pull-off test	<b><math>\geq 1,0 \text{ N/mm}^2</math></b>
Reaction to fire	<b>Class A</b>
Dangerous substances	<b>No performance determined</b>

**Health hazards:** Avoid contact of the product with skin and eyes, such as direct inhalation. In case of accidental contact of the product with skin, immediately remove it using soap and water. In case it splashes into eyes, immediately rinse them using plenty of water and seek for medical help. In case the product is swallowed seek for medical help.

**Fire:** Hidromal is not flammable.

**Cleaning and storage:** Clean loose residues of Hidromal with water. Old and used packaging should be disposed in accordance with the local rules and regulations for that type of waste. It is recommended to adjust the method of application and necessary quantities according to the potential of the building, as well as mandatory use of appropriate equipment.