



WATER-BASED LIQUID MEMBRANES

RAPIDFLEX™

Two component water-based bituminous liquid membrane for heavy duty applications

Rapidflex is an easy to apply, fast drying waterproofing material.

The material is based on a unique bituminous emulsion featuring outstanding flexibility and excellent adhesion to concrete and to metal surfaces.

Rapidflex can be applied with reinforcement geotextile for waterproofing flat roofs (S1-S4) in accordance to ETAG 005 (certificate no. ETA 09/0016), and also for underground application featuring underground water.



- » **Absolute waterproofing**
- » **High productivity (up to 1,000 m² / day)**
- » **Environmentally friendly**
- » **Applied immediately – No total curing of the concrete is required**
- » **Fast drying**
- » **Extremely high flexibility**
- » **Forms a seamless & uniform membrane**
- » **Radon-tight**

Product Uses

- Underground foundations.
- Basements floors and walls.
- Retaining walls.
- C&C Tunnels, tunnel portals and canals.
- Rooftop decks and verandas.
- Waterproofing of roofs in accordance to ETAG 005 part 5.

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General Instructions

- All surfaces to which **Rapidflex** is to be applied must be sound, stable and free from dirt, dust, loose debris, grease, segregation, bug-holes and anything that might interfere with adhesion of the material to the substrate.
- Concrete substrate should be clean, dry and smooth.
- **Rapidflex** is applied by a specific double head spraying machine. One nozzle sprays the **Rapidflex** bituminous emulsion and the second sprays the accelerator.
- **Rapidflex** can be applied over inclined planes, horizontal and vertical surfaces.
- **Rapidflex** should be thoroughly mixed and circulate for 15 minutes prior to use using the spraying machine's pump.
- **Rapidflex** and liquid accelerator are simultaneously sprayed at a ratio of 10:1 (10 **Rapidflex** : 1 accelerator).
- A quantity of 6.5 kg/m² of **Rapidflex** obtains a dry layer of 4mm thickness.
- Footstep is permitted 12 hours after spraying, according to drainage and weather conditions.
- In order to gain its full mechanical properties the product should be dried for 5 days, depends on local weather conditions.

Instructions for use

1. Accelerator solution preparation

- a. Solid accelerator should be diluted with water in a separate plastic container prior to use: 80% water, 20% accelerator by weight (25 kg bag of solid accelerator is dissolved in 100 liter of clean water to prepare the liquid accelerator used for spraying).
- b. Thoroughly mix to obtain complete dissolution.

2. Surface preparation

- a. All surfaces to which **Rapidflex** is to be applied must be sound, stable and free from dirt, dust, loose debris, oil, grease or honey combs and bug holes and anything that might interfere good adhesion of the material to the substrate.
- b. Before applying, **Rapidflex** should be thoroughly mixed by using the spraying machine's pump for 15 minutes to obtain homogenous emulsion.
- c. While preparing the **Rapidflex** emulsion the suction hose must be introduced inside the material at half of the height of the cube or the drum for 10 minutes, and after that it should be introduced all way down to the bottom of it.
- d. The primer is **Rapidflex** applied by spraying directly on the surface without the accelerator.
- e. The primer is sprayed under low pressure at a quantity of 250 gr/m² covering the surface with a thin, even layer, to result a brown surface with no excess primer.
- f. Let dry for about 1-4 hour (depending on weather conditions). Wait until the material becomes black, dry and still tacky.



3. Application

- a. Place the **Rapidflex** container and the accelerator container next to the spraying machine. Introduce the suction hoses of each material to its specific container. Operate the machine to circulate the emulsion and the accelerator.
- a. **Rapidflex** should be thoroughly mixed for 15 minutes prior to application, using the spraying machine's pump.
- b. The accelerator should be introduced to the **Rapidflex** by a foggy spray flow, with no excess however in such a way that all the sprayed **Rapidflex** is covered by the accelerator.
- c. Check that water is exuded from the new layer in droplets and not in streams.
- d. Check that the water exuded during the creation of the membranes is clear. Cloudy or brown water is a sign that the reaction is not complete and the membrane is impaired.
- e. Footsteps are permitted 12 hours after spraying, according to drainage and weather conditions.
- f. Let dry for 5 days for a complete dry, depending on local weather. On average it should take a day per each dry millimeter of the waterproofing layer.
- g. Spraying should be done by moving the spraying gun at a continuous pace horizontally or vertically until achieving the required thickness.
- h. **Rapidflex** may be applied to damp but not waterlogged surfaces. Do not apply during rain or if rain is expected during the application and/or 24 hours after it.
- i. The waterproofing layer has to be protected before backfilling with soil. Protect the waterproofing membrane with **AVG Geotextile** (180 gr/m²) and/or **Pazdrain FLT500**.
- j. The compaction of the backfill to a distance of 2 m from the wall should be done by a manual vibratory hand held compactor.
- k. No heavy compaction equipment should be allowed to travel close to the waterproofed wall. The backfill should not contain any stones over 40 mm.
- l. For special application it is recommended to consult Pazkar's technical department.

Equipment care

After finish the entire job clean the hoses of the **Rapidflex** emulsion with vegetable oil (diesel fuel) and spray the left over **Rapidflex** in the system to a garbage container until getting clear solvent coming out from the nozzle and the exhaust hose. The accelerator hoses should be cleaned with clean water, until clear water will come out from the nozzle and the exhaust hose. Before next application empty the system from the clean water and the diesel fuel with reverse process before spraying.

Packaging

Rapidflex is available in the following packaging options:

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- 1 ton IBC cube.
- 200 kg plastic drum.
- 25 kg accelerator bag.

Technical properties

Description	Property	Standard
Appearance	Emulsion: Dark brown Membrane: black	
Specific gravity, gr/ml	1.02 ± 0.01	
Solid content, %	60 ± 2	
Coverage, kg/m ²	5.0-8.5	
Dry film thickness, mm	3.0-5.0	
Flashpoint	Non flammable	
Application temperature	+5°C to 40°C	
Heat stability, °C	> 90	ASTM D2939
Cold flexibility, °C	< -20	ASTM D522
Low temperature flexibility and crack bridging	Pass, conduct @-26°C	ASTM C836
Tensile strength, MPa	> 0.1	ASTM D412
Elongation at break, %	> 1200%	ASTM D412
Resistance to water pressure, 1 atm. 24 hours	Pass	DIN 52123
Water vapor permeance, perms	0.35	ASTM E96
Recovery after 900% elongation, %	> 85	ASTM D412
Creep at 100°C	No creep	DIN 52123
Resistance to standing water	Passed	ASTM D2939
Bacterial attack in soil, 30 days 40°C	Pass	ASTM D3083

Storage

- Store under cover out of direct sunlight and protect from extreme temperature.
- In tropical climates the product must be stored in an air-conditioned environment.
- In cold climates the product must be stored in heated environment (over 10°C).

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- Do not freeze.
- Shelf life is up to 12 months from production date when stored in proper conditions as mentioned above.

Precautions

- For extended durability it is necessary to impregnate geotextile in the waterproofing system (polyester non-woven geotextile 180 g/m², tensile strength 2.0 kN/m, CBR puncture test 0.35 kN). The geotextile should be fully impregnated with the waterproofing material by application of the bitumen part only without the accelerator. For specific instruction please contact Pazkar's technical department.
- For roof application, it is important to verify on a periodical basis that there is no water leakage (from water tanks, air condition drains, etc.) causing water to stand on the waterproofing system.
- It is not recommended to enable constant water flow over the waterproofing system.
- Make sure you do not apply the material after the expiration date of its shelf life. (12 months from production date).

NOTE: Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Pazkar's representatives.

For Safety detailed instructions please refer to Pazkar's safety sheets (MSDS)



Warranty

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All orders are accepted subject to our current inventory, terms and conditions of sale and delivery.