

## MOSHE 3000 FLEX ROOF

Water-repellent waterproofing with thermal protection for existing roofs with infiltration and humidity problems

### ► Description

MOSHE 3000 FLEX ROOF was developed with nanotechnology, 100% inert minerals, and water-based acrylic resins. It has hydrophobic and thermal properties that have been tested and proven to be the best technical solution on the market in the recovery and prevention of pathologies related to waterproofing roofs, in addition to bringing greater thermal comfort. It is a flexible product, which creates a protective surface, providing high waterproofing, reducing thermal load, and closing cracks even with small movements and expansions.

### ► Recommended for

- Concrete slabs and walls
- Concrete, clay, fiber cement roofing and tiles

### ► Advantages

It is a monocomponent liquid waterproofing and water-repellent product, providing great ease and speed in execution. It has great durability since it is composed of inert minerals. As it is liquid and monocomponent nanotechnology, it is ready to use and is easy to apply, just open the bucket and mechanically mix for 2 minutes before application. In this way, MOSHE 3000 FLEX ROOF prevents infiltrations, increases the durability of the construction, and prevents the proliferation of fungi and bacteria, reducing the thermal load of the applied area.

MOSHE 3000 FLEX ROOF creates a protective film, sealing all pores, fissures, and cracks in walls, floors and slabs. It has excellent results for both positive pressure and negative water pressure acting on the surface, ensuring excellent waterproofing, in addition to being resistant to ultraviolet rays and reducing thermal load.

5-year warranty according to performance reports proven by third-party laboratories, except for project failures, structural failures, or misuse of the material.

It can be pigmented into other colors, but this could reduce the thermal effect of the product.

► **Technical Data**

| <b>Characteristics</b>                               |  |
|--|--|
| <b>Density</b>                                       | 0,83 g/cm <sup>3</sup>   |
| <b>Soluble in water</b>                              | Yes  |
| <b>pH</b>  | 8 – 12   |
| <b>Recommended substrate application temperature</b> | 0 to 50°C  |
| <b>Recommended application ambient temperature</b>   | 0 to 48°C  |
| <b>Material properties</b>                           |  |
| <b>Product type</b>                                  | Mineral base powder and water-based resins   |
| <b>Aspect</b>  | Liquid   |
| <b>Color</b>   | White  |
| <b>Storage</b>                                       | Store properly in original and intact packaging at temperatures between 0 and + 30°C |
| <b>Shelf life</b>                                    | Packaged product shelf life, 1 year from the manufacture date                        |
| <b>Packaging</b>                                     | 3,6 L Bucket / 18 L Bucket   |
| <b>Moisture</b>                                      | 0 %  |
| <b>Flammability</b>                                  | Non-flammable product (high flash point)   |
| <b>Odor</b>  | Characteristic   |
| <b>VOC</b>   | 19,3 g/l (USEPA) Method 24   |

► **Application Method**

MOSHE 3000 FLEX ROOF must be applied without adding other components, as it is a one-component, ready-to-use product. Can be applied with a low wool roller, foam roller, or brush.

**Application:**

- 1) Check the weather forecast. Avoid application in rainy weather or at risk of getting wet, except when this application is in a protected area. The best way to apply is with a wool paint roller. Do not apply the product to a damp surface, this surface must be 100% dry.
- 2) The substrate must be clean, without loose or disintegrating parts, and without the presence of oils, cement creams, mold release agents, or any other type of material that could impair adhesion.
- 3) The application of the first coat should be done evenly, ensuring coverage of the entire surface to be waterproofed and leaving no gaps in the application for better visualization and use.
- 4) Apply the next coat only after the previous one has completely dried, around 1 to 3 hours, depending on weather conditions and local ventilation.
- 5) Recommended to apply 2 coats and use polyester mesh to reinforce places with corners, joints, cracks, drains, or holes.
- 6) After the product has cured, perform a thorough visual inspection to verify that the entire substrate has been covered. If there are points without application or with an inadequate application, perform an additional coat.

- 7) Close the packaging well at the end of the application if there is any leftover material. Otherwise, the product may dry out in contact with air, which will prevent future applications.
- 8) Structures to be treated with MOSHE 3000 FLEX ROOF must not have cracks or concrete failures greater than 2 mm wide.
- 9) Pay attention to the expansion joints of the structural project; MOSHE 3000 FLEX ROOF does not replace specific elastomeric gaskets for expansion joints.
- 10) Do not apply on a substrate saturated with water. Residual water inside the substrate may evaporate, causing the formation of bubbles in the application or release (when this occurs, remove this bubble, and repeat the application in the removed area, according to the instructions above).
- 11) When there are pipes, apply specific products for this purpose.
- 12) Carry out a tightness test for at least 72 hours, 48 hours after applying the product.
- 13) We are not responsible for project or structural failures, and it is strongly recommended that the Moshe 3000 technical department be contacted to clarify any doubts before installing the Moshe 3000 Flex.
- 14) The product performance guarantee is subject to the purchaser forwarding to MOSHE 3000, via e-mail [comercial@moshe3000.com](mailto:comercial@moshe3000.com), a tightness report (with photographic report) of the substrate on which the product has been applied, with information regarding the construction where it has been used (address and particularization of the area applied), to be issued by the Construction Company or by the company that applied the product, to be performed after the product has been applied and before mechanical protection is applied, when applicable. Failure to send the tightness report exonerates MOSHE 3000 from any responsibility for the product performance. MOSHE 3000 is not responsible for damages caused to the product during the mechanical protection execution process or others after the tightness test. The purchaser acknowledges having access to the product performance reports and that the approval in the tightness test is sufficient to prove its adequate performance.

#### ► Dosage

The average yield of the product is 3,78 m<sup>2</sup>/L per coat, depending on the roughness of the applied surface. The rougher, the lower the yield.

**Application:** 2 coats

#### ► Personal protective equipment

Wear a personal protective mask, natural rubber gloves, goggles or face protection, suitable clothing, and protective boots. If any symptoms of allergy, skin irritation, or eye contact, seek medical attention immediately.

Do not reuse packaging for food purposes. Care should be taken with opened packages in the presence of children, whether or not there's still product inside them.

#### ► Transport Limitations

Maximum stacking of 3 buckets of 18 L or 5 buckets of 3.6 L.

**▶ Storage**

Store under cover, protecting the buckets from rain and sun, keep the containers tightly closed and protected from damage.

**▶ Certification and Technical Reports**

**Product certified by the HBC (Healthy Building Certificate)** qualified and certified product, as a product that does not cause any risk to human health and the environment, therefore, a healthy and sustainable product. The HBC grants the MOSHE 3000 product the title of Qualified and Certified Product registered under the Code PROD20201007BRAPR0012 with validity until 02/June/2023.

**According to SGS USA Report:** Report of Product Testing Report – Interim Product: MOSHE 3000 FLEX Lab No.: 22-551, it was verified that in the ASTM C1583 test – Bond Strength to Concrete, the product resisted a pressure of 100 Psi in the tests with 7 and 28 days of cure, in the ASTM D6904 test - Wind-Driven Rain, it verified that the product resisted the spray of water for approximately 24 hours where the water was sprayed at a rate of 60 to 70 gallons per hour and from 5 inches of water pressure (dynamic pressure equivalent to a wind speed of 98 mph) without passing water and in the ASTM E96 – Water Vapor Transmission test, it was verified that when tested at a temperature of  $73.4 \pm 2^{\circ}\text{F}$  and relative humidity  $50 \pm 2\%$  Water Vapor Transmission occurred – 20 thousand WFT (perm) from 3.7 to 28 days.

**According to IPT's report TEST REPORT No. 1 131 867-203**, it was verified that in the tests according to the ABNT NBR 10.787 test of Water Penetration under Positive Pressure, it was verified that there was no penetration of water in the specimen, after application of pressure of  $(0.10 \pm 0.01)$  MPa for 48 hours, followed by application of pressure of  $(0.25 \pm 0.01)$  MPa for 24 hours. According to the ABNT NBR 10,787 and 11,905 tests on Penetration of water under negative pressure, the product proved to be watertight up to a pressure of at least 0.10 MPa for 48 hours. According to the ABNT NBR 12.171 Test of Tensile Adhesion Resistance (minimum), the product showed an average resistance of 3.8 MPa, much higher than the standard that requires at least 0.5 MPa. According to the ABNT NBR 7462 test for Elongation at break (minimum) the product reached 3% and Elongation at break after aging (minimum) the product reached 5%, higher than the expansion of the concrete which is 0.03%.

**According to IPT's report TEST REPORT No. 1 140 327-203**, it was verified that in the tests according to ASTM D2369-20 - Standard Test Method for Volatile Content of Coatings (Procedure IPT6806 - Rev. 8), ASTM 4017-22 - Standard Test Method for Water in Paints and Paint Materials by Karl Fischer Method and United States Environmental Protection Agency (USEPA) Method 24 - Determination of Volatile Matter Content, Water Content, Density, Volume Solids, And Weight Solids of Surface Coatings - method for water-based coatings, it was found that the Volatile Matter Content, non-aqueous - g/L of MOSHE 3000 FLEX is 19.3 g/L which is well below the limits required by the USGBC LEED Certification which according to South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011 is 400 g/L.

**► Observations**

Responsible Chemist: Eder de Souza CRQ-IV SP 04414353 Technician  
Responsible Developer: Marcos Alberto Casado Pereira Produced by Moshe  
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The information contained in this document is based on our knowledge for your help and guidance. We point out that the performance of the products depends on the conditions of surface preparation, application, and storage, which are not under the responsibility of Moshe 3000. The performance depends on the application technique, equipment, and substrate conditions. Therefore, we do not assume any responsibility regarding the yield and performance of any nature as a result of misuse of the product and misapplication. This product requires specialized labor for application. For more information, consult the technical department.