MOSHE 3000 FLEX METAL THERMIC

Monocomponent water-repellent waterproofing agent with thermal protection for metal structures and roof tiles, combating rust and increasing the durability of the structure

▶ Description

MOSHE 3000 FLEX METAL THERMIC was developed with nanotechnology, 100% inert minerals, and water-based acrylic resins. It has hydrophobic and thermal properties tested and proven as the best technical solution on the market in the recovery and prevention of pathologies related to waterproofing and oxidation of tiles, sheets, and metallic structures. It is a flexible product, which creates surface protection, providing high waterproofing and closing fissures and cracks even with small movements and expansions, combating oxidation on metallic surfaces, in addition to reducing the thermal load on the substrate.

▶ Recommended for

- Metallic structures
- Slabs and walls (metallic)
- Water tanks, cisterns, and metallic reservoirs
- Metal 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 METAL THERMIC 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 METAL THERMIC creates a protective film, sealing all pores, fissures, and cracks on metallic surfaces. It has excellent results for both positive and negative water pressure acting on the surface, ensuring excellent waterproofing. It also has resistance against the actions of ultraviolet rays, fights rust, and reduces the 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

Characteristics	
Density	1,09 g/cm³
Soluble in water	Yes
pH	8 – 12
Recommended substrate application temperature	0 to 50°C
Recommended application ambient temperature	0 to 48°C
Material properties	
Product type	Mineral base powder and water-based resins
Aspect	Liquid
Color	White
Storage	Store properly in original and intact packaging at temperatures between 5 and + 30°C
Shelf life	Packaged product shelf life, 1 year from the manufacture date
Packaging	3,6 L Bucket / 18 L Bucket
Moisture	0 %
Flammability	Non-flammable product (high flash point)
Odor	Characteristic
VOC	19,3 g/l (USEPA) Method 24

▶ Application Method

MOSHE 3000 FLEX METAL THERMIC must be applied without adding other components, as it is a single-component product ready for application. 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, it 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 an additional coat and use polyester mesh to reinforce places with corners, joints, cracks, 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) For heavily oxidized surfaces, it is necessary to remove excesses with a wire brush. MOSHE 3000 FLEX METAL THERMIC changes color in places with a concentration of oxidized metals. If this occurs, apply a new coat until the last layer remains entirely white.
8) 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.
9) The structures to be treated with MOSHE 3000 FLEX METAL THERMIC cannot have cracks greater than 2 mm wide.
10) Pay attention to the expansion joints of the structural project; MOSHE 3000 FLEX METAL THERMIC does not replace specific elastomeric gaskets for expansion joints.
11) When there are pipes, apply specific products for this purpose.
12) Carry out a water-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, 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 m²/L per coat, depending on the roughness of the applied surface. The rougher, the lower the yield.

Oxidized metallic surfaces: minimum of 3 coats

Non-oxidized metal surfaces: minimum of 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 PROD20221120BRAPR0036 with validity until 21/November/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 ± 2ºF and relative humidity 50 +/- 2% Water Vapor Transmission occurred – 20 thousand WFT (perm) from 3.7 to 28 days.

According 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 ± 0.01) MPa for 48 hours, followed by application of pressure of (0.25 ± 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, effecitve 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 Materiais de Construção Ltda Ltd EPP CNPJ 02.732.735/001
Rua Zélia, 454 Bairro Assunção São Bernardo do Campo / SP – Brazil
Moshe 3000 Brasil Customer Service +55 11 97673 1458