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|  | Product Technical Information | Number | IT.015.1 |
| | | Date of issue | 2025-08-14 |
| | | Version | 4.3 |
| | | AlphaThor SA | |

Self-adhesive four-layer (reinforced) waterproof EPDM membrane for roofing – AlphaThor SA

1. **Technical Specification:** EN 13956:2013-06 Flexible waterproofing sheets – Plastic and rubber sheets for roof waterproofing – Definitions and characteristics
2. **Manufacturer / Place of Production** Alpha Dam Sp. z o.o., 87-207 Dębowa Łąka 45
3. **Product Description, Intended Use and Application Range**

The self-adhesive, four-layer (reinforced) EPDM membrane AlphaThor SA, featuring a fiberglass core and laminated on the underside with acrylic adhesive, provides a durable and highly effective waterproofing solution. Thanks to innovative technology, the product exhibits excellent mechanical properties and outstanding resistance to UV radiation. AlphaThor SA meets the requirements for construction materials specified in the Soil Quality Regulation regarding heavy metals and salts.

The product is intended for use as a waterproofing top layer in the insulation of terraces, balconies, and flat roofs, both in traditional and inverted systems.

Due to its durability, high chemical and mechanical resistance, and resistance to weather conditions, the AlphaThor SA membrane is an ideal solution for applications requiring reliable and long-lasting protection against water and moisture.
4. **AlphaThor System Components**
 - 4.1. AlphaThor self-adhesive membrane reinforced with fiberglass mesh (IT.015.1)
 - 4.2. AlphaThor membrane reinforced with polyester mesh (IT.015.3)
 - 4.3. AlphaThor membrane without reinforcement (IT.015.5)
 - 4.4. AlphaThor welding tape, 150 mm wide, 20 m roll
 - 4.5. Pipe sleeves made of non-reinforced AlphaThor – sizes \varnothing 50 mm, 75 mm, 90 mm, 125 mm
 - 4.6. Vertical water outlet – sizes \varnothing 50 mm, 75 mm, 90 mm, 120 mm; pipe length 600 mm
 - 4.7. Horizontal water outlet – size \varnothing 75 mm
 - 4.8. Vent pipes – sizes \varnothing 80 mm, 110 mm
 - 4.9. Cable penetrations – sizes \varnothing 75 mm, 90 mm, 110 mm
 - 4.10. Corners made of non-reinforced AlphaThor – 100 mm x 100 mm x 100 mm
 - 4.11. AlphaThor 822 primer for AlphaThor 812 sealing adhesive
 - 4.12. AlphaThor 812 UV adhesive
 - 4.13. APP 40H vulcanizing tape
5. **User Information**
 - 5.1. Installation must follow construction best practices, current technical knowledge, and the installation manual.
 - 5.2. AlphaThor SA should be installed under normal roofing conditions. Do not install when the temperature is below +5°C.

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- 5.3. The self-adhesive **AlphaThor SA** has layer of acrylic adhesive. This is enough adhesive to bond the membrane even to slightly uneven surfaces or to seal small cracks. Acrylic adhesive can be used on porous or moisture-absorbing surfaces.
 - 5.4. Acrylic adhesive remains permanently “active.” This means that, unlike other adhesives, acrylic does not harden even when exposed to air or extreme and changing temperatures – for over 15 years – and stays flexible.
 - 5.5. Before applying, the surface must be prepared. The substrate should be even, stable (non-deformable), compact (no loose particles), dry, and free of blisters, folds, sharp edges, harmful cracks, bulges, etc.
 - 5.6. When a dedicated primer is used, excellent adhesion can be achieved even to highly porous materials like aerated concrete. Using the primer is especially recommended for vertical surfaces, and it should be applied according to the manufacturer’s technical guidelines.
 - 5.7. The self-adhesive **AlphaThor SA** membrane can be installed on almost any stable substrate using the acrylic adhesive layer applied to the underside of the membrane.
 - 5.8. Before gluing, remove the protective foil from the bottom layer.
 - 5.9. Then place the **AlphaThor SA** membrane on the surface and roll out any air bubbles using a pressure roller.
 - 5.10. **Longitudinal joints:** The overlap between membrane strips should be at least 5 cm. **AlphaThor SA** has a 50 mm strip without acrylic adhesive, and on the opposite side, there are printed lines at 50 mm and 110 mm from the membrane edge.
 - This strip is used for longitudinal joining. The overlap should be sealed using hot-air welding. The required welding temperature is approx. 400°C, depending on the ambient air temperature and welding speed.
 - Before starting the welding work, test the welding settings on a piece of membrane and adjust the air temperature accordingly.
 - 5.11. **End-to-end joints (crosswise):** Lay the edge of one strip directly against the edge of the next strip, without overlapping. Then weld a piece of membrane (150 mm or 200 mm wide) over the joint, creating a secure and durable cross-connection.
 - 5.12. To avoid water penetration, **AlphaThor SA** should be installed on surfaces with a minimum slope of 1.5%. Sealing should be extended at least 15 cm vertically onto adjacent vertical surfaces.
 - 5.13. To improve rainwater drainage, outlets should be placed away from the joints between AlphaThor membrane strips.
 - 5.14. In environments with aggressive conditions – such as acid rain or acid fog – avoid using drainage components made of zinc or zinc alloys.
 - 5.15. To ensure optimal service life of the entire waterproofing system, regular inspections and maintenance should be performed in line with national regulations
6. **Curing / Shelf Life**
AlphaThor SA, in its original packaging, can be stored for up to 24 months from the production date.
 7. **Storage**
AlphaThor SA rolls should be stored and transported in a cool and dry place (+5°C to +25°C), in a vertical position. Do not stack pallets on top of each other.

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8. Warranty

The product is covered by a 10-year waterproofing warranty from the date of purchase.

The warranty applies if:

1. The product is used according to the Technical Information, especially the Installation Guide (see section 5). The manufacturer is not responsible for any damage or faults caused by incorrect installation, use, or purpose.
2. The product is stored according to the Technical Information.
3. All recommendations are based on current knowledge, experience, and test results. This information is not legally binding and does not remove the installer's responsibility to follow good construction practices and adapt to on-site conditions. During installation, applicable standards and common building practices must be followed.
4. Proof of purchase (invoice) and the product ID number must be provided.

9. CE Marking Information

According to standard EN 13956:2013-6



According to standard EN 13956:2013-6

- Factory Production Control Certificate No. 1434-CPR-0256 for AlphaThor
- Factory Production Control Certificate No. 1434-CPR-0255 for AlphaThor NZB

The CE marking is supervised by the Factory Production Control system, certified by the Polish Center for Testing and Certification S.A., (Notified Body No. 1434).

10. Product Properties

| Essential Characteristics | Unit | Declared Performance |
|----------------------------|-------------------|----------------------|
| Visible defects | - | none |
| Length | m | 15 (0% do +5%) |
| Width | m | 1,01 (-0,5% do 1%) |
| Straightness | mm | ≤ 30/10 m |
| Thickness | mm | 2,040 (±5%) |
| Mass per unit area | kg/m ² | 2,080 (±5%) |
| Water tightness | 10 kPa method B | watertight |
| Reaction to fire | class | E |
| Peel resistance of joints | | |
| - cross lap | N/50 mm | ≥ 150 |
| - longitudinal lap | N/50 mm | ≥ 150 |
| Shear resistance of joints | | |
| - cross lap | N/50 mm | ≥ 350 |
| - longitudinal lap | N/50 mm | ≥ 350 |
| Tensile strength | | |
| - lengthwise | N/50mm | ≥ 400 |
| - crosswise | N/50mm | ≥ 400 |

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| Elongation at break | | |
| - lengthwise | % | ≥ 55 |
| - crosswise | % | ≥ 60 |
| Impact resistance | mm method A | ≥ 500 |
| Resistance to static load | kg method B | ≥ 20 |
| Tear resistance | | |
| - lengthwise | N | ≥ 150 |
| - crosswise | N | ≥ 120 |
| Dimensional stability | | |
| - lengthwise | ΔL [%] | ≤ -1,4 |
| - crosswise | ΔT [%] | ≤ -1,0 |
| Flexibility at low temperature | °C | ≤ -40 |
| Hail resistance | m/s | ≥ 19 |
| UV resistance | 1000 h 160MJ/m ² | meets requirements watertight |
| UV resistance | 3000 h 480 MJ/m ² | meets requirements watertight |
| Durability after artificial aging | - | meets requirements |
| Durability in alkaline environment | - | watertight |
| Resistance to water vapor penetration | | (±30 %) |
| 1. Water vapor transmission rate | g[kg/(m ² s)] | 4,44 x 10 ⁻⁹ |
| 2. Water vapor diffusion resistance | (m ² s Pa)/kg | 5,06 x 10 ⁺¹¹ |
| 3. Water vapor diffusion factor | μ | 98396,9 |
| 4. Sd value | Sd[m] | 98,397 |
| Adhesion – concrete with acrylic primer (Qdek acrylic) | N/ø50 mm MPa | 150 0,022 |
| Adhesion – concrete with Qdek2400 primer | N/ø50 mm MPa | 230 0,033 |
| Adhesion – bare EPS | N/ø50 mm MPa | 80 0,012 |
| Adhesion – EPS with Qdek2400 primer | N/ø50 mm MPa | 140 0,020 |
| Adhesion – bare OSB | N/ø50 mm MPa | 160 0,023 |
| Adhesion – OSB with Qdek2400 primer | N/ø50 mm MPa | 240 0,035 |

On behalf of the manufacturer:
Quality System Representative



Iwona Majek
Dębowa Łąka, 14 August 2025