

BASILISK SELF-HEALING WATERPROOF MORTAR CATALOG

Basilisk Self-healing Waterproof Mortar

Self-healing support | Water-tightness | Crack repair | Long-term durability

Basilisk Self-healing Waterproof Mortar is a material solution designed to support waterproofing reinforcement, crack repair, and long-term durability in concrete and mortar applications.

When suitable micro-cracks occur and moisture enters the material, Basilisk microbial self-healing technology helps form calcium carbonate inside the crack. This process supports improved water-tightness and helps reduce the risk of further moisture intrusion under suitable conditions.

Self-healing

Water-tightness

Long-term durability

VOC-free

PVA fiber

Sustainable building material

Crack
repair
support

Water-
tightness
support

Long-term
durability



Crack Repair Support

Helps fill suitable micro-cracks through calcium carbonate formation.

Waterproofing Reinforcement

Focuses on crack-related water paths, not only surface protection.

Long-term Durability

Supports improved material protection and reduced maintenance pressure.

Sustainable Application

Helps reduce repeated repair work and material waste over time.

Project evaluation note: Crack condition, substrate status, leakage location, and environmental exposure should be reviewed together before product selection.

Waterproofing problems often begin with cracks and water paths

Concrete and mortar may develop micro-cracks over time due to shrinkage, stress, temperature changes, structural movement, substrate variation, or long-term moisture exposure.

At first, these cracks may not appear serious. They may not immediately cause visible leakage. However, once a crack becomes a path for water, the problem is no longer only surface moisture.

Moisture, chloride ions, and other harmful substances may enter the material through cracks. Over time, this can affect water-tightness, reinforcement protection, maintenance frequency, and the service life of the structure.

For humid, rainy, coastal, or earthquake-prone environments, surface waterproofing alone may not fully respond to long-term durability requirements.



Micro-crack Formation

Concrete and mortar may form small cracks due to shrinkage, stress, temperature changes, or structural movement.

Water Path Development

Once cracks become water paths, moisture may repeatedly enter the material.

Reinforcement Protection Pressure

If moisture and chloride ions continue to enter the substrate, deterioration risk may increase.

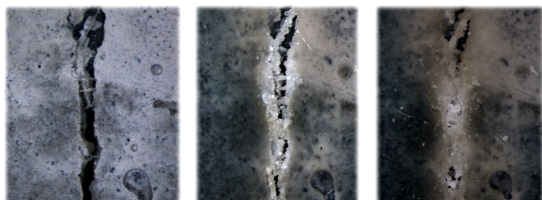
Maintenance Cycle Pressure

Repeated repair work increases maintenance cost and may keep the project in an unstable condition.

The value of Basilisk Self-healing Waterproof Mortar is to bring crack repair support, water-tightness, and long-term durability into one material selection discussion.

A self-healing mechanism activated by moisture and cracks

The core of Basilisk technology is a microbial self-healing mechanism. Special microorganisms and nutrients are introduced into the material system in a dormant state.



Moisture Activates the Process

When cracks occur and moisture enters the crack area, the microorganisms may be activated under suitable conditions.

Calcium Carbonate Formation

Through microbial activity, calcium carbonate is formed and gradually deposited inside the crack.

1. Crack Formation

Concrete or mortar develops suitable micro-cracks during use.

2. Moisture Entry

Moisture and air enter the crack and create conditions for microbial activation.

3. Calcium Carbonate

The microorganisms form calcium carbonate through metabolic activity.

4. Crack Filling Support

Calcium carbonate deposits inside the crack, helping improve water-tightness.

Basilisk Self-healing Waterproof Mortar does not make concrete unable to crack. Its purpose is to help reduce later moisture intrusion and durability risks after suitable cracks appear.

KEY BENEFITS



A material system for cracks, water-tightness, and durability

Basilisk Self-healing Waterproof Mortar combines microbial self-healing technology with waterproof mortar application. It is designed for waterproofing reinforcement, crack-related moisture control, substrate protection, construction efficiency, and long-term maintenance planning.

PVA Fiber Reinforcement

Uses PVA fiber to form a reinforced internal structure and help reduce early crack risk.

Microbial Self-healing Support

Under suitable conditions, calcium carbonate formation may help repair suitable cracks up to approximately 1.0 mm.

Multi-layer Protection Concept

Helps reduce the chance of moisture, chloride ions, and harmful substances entering deeper through cracks.

Construction Efficiency

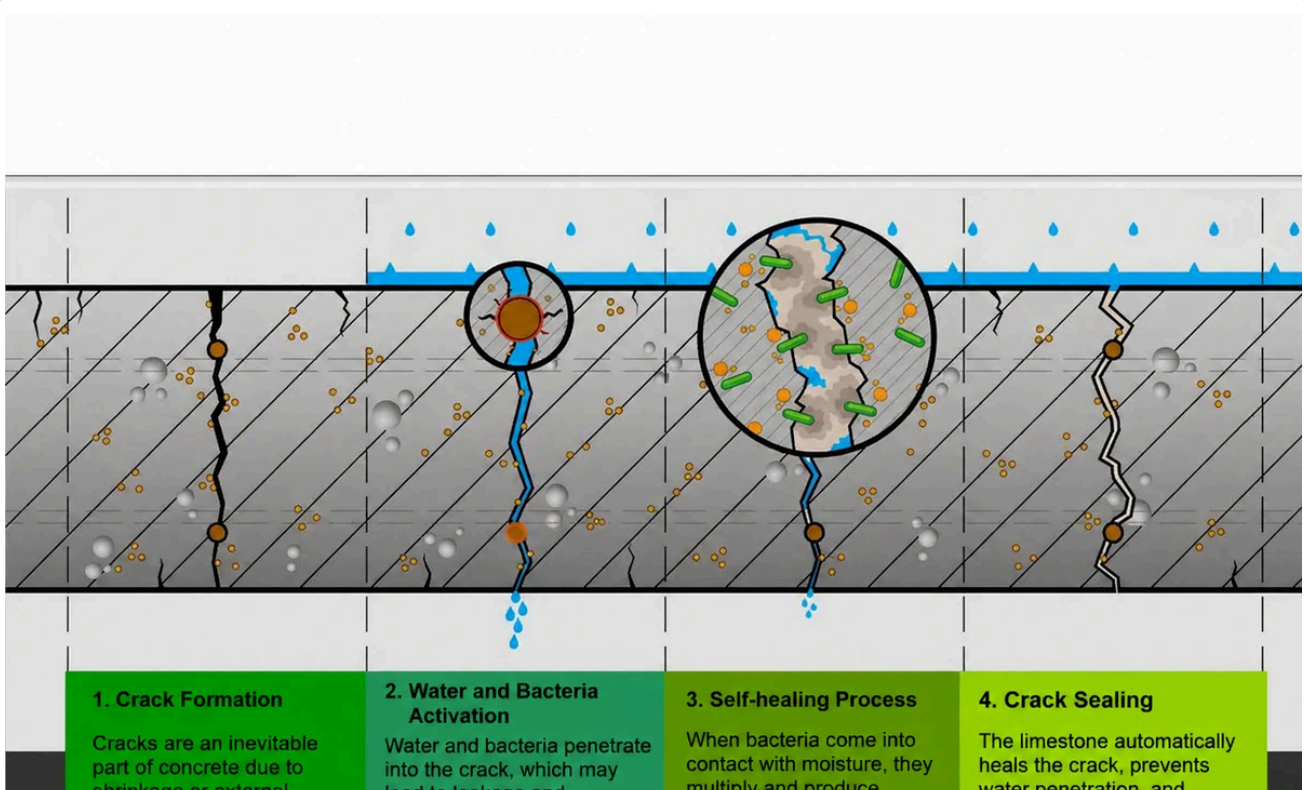
Combines waterproofing and base-layer functions, helping simplify the construction process.

VOC-free Material Direction

Contains no harmful volatile organic compounds, supporting green material and healthy building applications.

Long-term Durability Support

Through self-healing support and improved water-tightness, it helps reduce future maintenance pressure.



Beyond surface waterproofing: a material approach to cracks and water-tightness

Traditional surface waterproofing materials usually work by forming a protective layer on the surface of the substrate. This helps reduce direct water contact with the substrate.

However, when a project involves cracks, water paths, underground structures, water-retaining spaces, coastal exposure, or long-term maintenance pressure, surface protection alone may not be enough. Basilisk Self-healing Waterproof Mortar provides another material approach by focusing on crack repair support, water-tightness, and long-term durability.

Comparison Table

Comparison Item	Traditional Surface Waterproofing	Basilisk Self-healing Waterproof Mortar
Working Position	Mainly forms a waterproof layer on the surface.	Works with crack-related water paths and self-healing support.
Waterproofing Logic	Builds an external barrier first.	Helps support water-tightness after suitable cracks occur.
Aging Risk	Surface layers may be affected by UV exposure, time, abrasion, or site conditions.	The material concept is related to crack repair support inside the material system.
Maintenance Approach	Requires inspection and maintenance based on surface layer condition.	Helps reduce later maintenance pressure through self-healing support.
Suitable Use	General surface waterproofing and short-term barrier needs.	Projects concerned with cracks, water-tightness, long-term durability, and maintenance cost.

Traditional waterproofing materials still have their proper use when the project mainly requires surface water blocking. When the issue involves cracks, water paths, long-term maintenance, and durability requirements, water-tightness and self-healing capability should also be included in the material evaluation.

Suitable project conditions for Basilisk Self-healing Waterproof Mortar

Basilisk Self-healing Waterproof Mortar is not required for every waterproofing project. It is more suitable for projects where the goal is not only surface waterproofing, but also crack control, water-tightness, long-term durability, and reduced maintenance pressure.

Basements and Retaining Walls

Once leakage occurs in underground structures, later repair is often more difficult. Crack control and water-tightness should be considered early.

Water Tanks, Pools, and Landscape Ponds

For spaces in long-term contact with water, material selection should consider crack behavior and long-term protection.

Exterior Wall Cracks and Leakage Risks

Exterior walls face rain, moisture, temperature variation, and wind pressure. Cracks may become long-term water paths.

Coastal, Humid, or Chloride-exposed Environments

Salt, chloride ions, and high humidity can increase the risk of crack-related moisture intrusion.

Parking Areas and Public Facilities

Public facilities and parking areas are often difficult to shut down frequently for repair. Maintenance efficiency is important.

Long-term Maintenance Cost Control

If the goal is reducing future maintenance pressure, Basilisk Self-healing Waterproof Mortar may be included in the comparison.

Suitability should be evaluated based on crack condition, substrate status, leakage location, environmental exposure, and construction goals.

Why different engineering environments consider self-healing concrete

The value of self-healing concrete references is not that every project should use the same material. The value is to show which project conditions may lead engineers and owners to consider self-healing material solutions.



Water Treatment Structures

Water-related structures remain in long-term contact with moisture. Evaluation often focuses on leakage risk, water-tightness, and maintenance pressure.



Harbor and Coastal Environments

Harbor environments face salt, humidity, and sea wind. Material evaluation should consider more than surface water blocking.



Industrial and Energy Facilities

Industrial and energy facilities usually prefer to avoid frequent shutdowns for repair. Service life and maintenance efficiency are important.



Underground Expansion Projects

Underground spaces are harder to access and repair after completion. Water-tightness and long-term stability should be considered early.



Large-scale Aquaculture Facilities

Facilities connected with water use require stable material performance, water-tightness, and durability.



Humid, Rainy, and Coastal Conditions

In humid, rainy, or coastal conditions, cracks, water paths, and long-term maintenance should be evaluated before material selection.

These reference directions show that the value of self-healing concrete and self-healing waterproof mortar is not only crack filling. It is also a way to rethink material selection from water-tightness, durability, and life-cycle maintenance perspectives.

Information to prepare before project evaluation

Evaluation for Basilisk Self-healing Waterproof Mortar should begin with site conditions, not only the product name or a single function.

Different crack conditions, substrate status, leakage locations, environmental exposure, and construction goals can affect whether the material is suitable and whether other waterproofing or repair methods should be considered together.

Pre-construction Checklist

1

Crack and Leakage Condition

Confirm crack location, crack width, and whether there is leakage, moisture, or efflorescence.

2

Substrate and Environmental Conditions

Confirm whether the substrate is stable and whether the area is underground, exterior wall, water-retaining space, or coastal environment.

3

Existing Repair Condition

Confirm whether previous waterproofing or repair work has been done, and review the current condition of existing waterproofing layers or repair materials.

4

Project Goal

Confirm whether the goal is water stopping, waterproofing reinforcement, crack repair, improved water-tightness, or reduced long-term maintenance.

Recommended Information Before Quotation

- Site photos
- Close-up photos of cracks
- Photos of leakage or damp areas
- Construction area dimensions
- Substrate type and current condition
- Indoor, exterior wall, underground, water-retaining, or coastal environment description
- Previous waterproofing or repair history
- Expected construction timing and usage requirements

Need to evaluate whether Basilisk Self-healing Waterproof Mortar is suitable for your project?

If you are evaluating crack repair, waterproofing reinforcement, improved water-tightness, or long-term durability materials, please provide site photos, crack conditions, leakage location, and environmental information for review.

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