



# Protectosil® Application Instructions

## Protectosil®BH-N and Protectosil®BH-N Plus

### MANUFACTURER

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PROTECTOSIL PRODUCTS ARE MANUFACTURED AT THE EVONIK CORPORATION THEODORE ALABAMA PLANT UNDER A QUALITY SYSTEM CERTIFIED TO ISO-9001 AND 14001 REQUIREMENTS

### PRODUCTS

The ProtectosilBHN and Protectosil BHN Plus are neat (solvent-free) products for use on a wide variety of substrates. A brief description of each product is given below. For more detailed information read the Product Data Sheet for the particular Protectosil product:

ProtectosilBHN is designed for penetrating dense concrete substrates. It has exceptional penetration properties and has excellent chloride ion screening properties.

ProtectosilBHN Plus is a water and oil repellent. It combines the silane of regular BH-N with an oleophobic additive that helps reduce staining of oil-based food and automotive fluids.

### PRE-INSPECTION

New concrete must be allowed to cure a minimum of 28 days (shorter time periods have to be approved by Technical Service Department).

Concrete repair and replacement must be completed prior to application of Protectosil products. Concrete patches must be allowed to cure at least 10 days.

Structural cracks that exceed 5 mils must be caulked in a manner and with material acceptable to the specifying engineer.

All in-place caulking or sealing materials must be cured prior to application of Protectosil products.

**IMPORTANT:** Surfaces treated with Protectosil BH-N PLUS do not allow paint, caulking or other material to bond. Apply these materials before the Protectosil BH-N PLUS application.

### PRE-TESTING

Prior to the start of the application, it is required that the applicator apply the Protectosil product to a representative test area. The test patch should then be evaluated in accordance with Evonik's standard procedures to verify that it will effectively protect the structure and will not have any adverse effect on related construction materials, such as plastic windows and asphaltic product.

Normally, any adverse reactions with the substrate are noticeable immediately after the sprayed surface is dry. If for any reason the appearance of the substrate is not what is expected, do not continue with the application. Contact your local sales representative, distributor or chemist for advice.

### SURFACE PREPARATION

All surfaces must be cleaned to remove all traces of dirt, dust, efflorescence, mold, salt, grease, oil, asphalt, laitance, curing compounds, paint, coatings and other foreign materials.

The purpose of cleaning is to remove the contaminants and leave the pores open to allow penetration of Protectosil products.

Surface cleaning should be closely monitored by the contractor and must not cause any unnecessary surface damage. Surface preparation shall be subject to final approval by the specifying engineer.

Proper surface preparation will depend on the type of substrate (concrete, masonry, stone, etc.), as well as the type of surface contamination. To ensure proper performance of Protectosil products, the same cleaning technique that will be used on the project should also be used to prepare the test area.

(continued)

The following are acceptable cleaning techniques.

1. Horizontal concrete surfaces may be cleaned using shot blast equipment such as Blas Trac, Wheelabrator Frye Co., Turbo Blast, National Surface Preparation, and Nelco. The size of the shot and travel speed of the equipment should be selected to provide a uniformly clean surface with a uniform profile acceptable to the specifying engineer. The deck surface next to curbs, columns, etc., which is not cleaned by the shot blast equipment, as well as three (3) inches up the walls directly adjacent to the deck surfaces, should be cleaned by sandblasting. High-pressure water blasting equipment can also be used. Generally, water pressure from 3000 to 5000 psi is a minimum requirement. For larger areas (> 50,000 sq.ft.) it is desirable to use a water blaster with a walk behind "lawn mower" type device with rotating nozzles.
2. Vertical Surfaces may be cleaned using either hot or cold high pressure water (minimum 3000 psi) or high pressure steam.
3. All Surfaces:  
Chemical cleaner may be used if required to remove certain types of surface contamination. The cleaner must be used in accordance with the individual manufacturer's instructions. The surface should be thoroughly rinsed to remove all cleaning material using a minimum of 3000 psi water pressure.

Wet or dry sandblasting may be used on concrete surfaces.

#### DELIVERY, STORAGE AND HANDLING

Protectosil products shall be delivered to the job in the original sealed containers clearly marked with identification, including type of material and lot number and with the seals intact.

Store Protectosil products in a covered area protected from rain or standing water, where temperatures are not less than 0°F or more than 120°F, with adequate ventilation and away from any sources of ignition such as sparks, open flames, etc. If Protectosil is in storage for more than one year, a sample should be sent to our laboratory for analysis prior to use and the container must be properly resealed.

#### JOB CONDITIONS

The contractor shall not proceed with the application if:

- A. The ambient temperature is below 20°F unless authorized in writing by Evonik.
- B. The ambient or surface texture is above 100°F.
- C. Rain is expected within 2 hours following the application.
- D. Precipitation has occurred within 24 hours prior to application.
- E. High winds or other conditions prevent proper application and overspray that may have an adverse effect on surrounding materials

#### APPLICATION

Protectosil products shall be applied using low-pressure (15-25 psi) pumping equipment with fan type spray nozzles. Protectosil products shall be applied as supplied by Evonik without any alteration or dilution.

The applicator shall provide, install and maintain suitable traps, tarps, and/or drop cloths to protect against damage caused by spillage or heavy overspray. Protect all materials containing asphalt from overspray. Protect all coated glass materials. (Although Protectosil BHN will not leave a residue on glass, it may react with plastic coatings on the structure, glass or surrounding property).

A flood application of the material is required. On horizontal surfaces, the liquid material shall pond on the surface at least 5 seconds before being absorbed. On vertical surfaces, the liquid material shall run down 6-8 inches below the spray pattern.

On horizontal surfaces, traffic must be kept off the treated surfaces until an hour after the treated surface has completely dried.

The contractor shall provide adequate ventilation during the application and shall follow all safety precautions.

**IMPORTANT: THE PROTECTOSIL CONTAINER IS LABELED WITH IMPORTANT SAFETY INSTRUCTIONS. READ THEM CAREFULLY BEFORE USING. MATERIAL SAFETY DATA SHEETS ARE PROVIDED BY EVONIK AND MUST BE CAREFULLY REVIEWED PRIOR TO APPLICATION OF PROTECTOSIL PRODUCTS.**

For more information, MSDS and the most updated product information, and to find your local representative, go to [www.protectosil.com](http://www.protectosil.com)

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