



EUCLID CHEMICAL

Application Guide

EucoTilt Bondbreakers

INTRODUCTION

The following instructions detail the general installation procedures for EucoTilt bondbreakers manufactured by The Euclid Chemical Company. In addition to this application guide, review the technical and safety data sheets for each EucoTilt product.

Note: If the contractor is not familiar with the application techniques discussed in this application guide, a pre-job meeting is recommended to review the project details unique to the particular job. Contact your local Euclid Chemical Company representative for additional information.

SURFACE PREPARATION

A properly prepared concrete surface is essential to a successful application of EucoTilt, whether used as a cure coat or bondbreaker application. In all cases, the concrete surfaces shall be smooth and dense. EucoTilt shall not be used as a cure, or bondbreaker, on broom finished or otherwise porous, rough-finished concrete surfaces. Remove all dust, dirt, standing water, and other contaminants from concrete surfaces prior to any application. **If curing compounds or coatings from other manufacturers are present on casting surfaces, they must be completely removed prior to application of EucoTilt.** Do not use pressure washers for surface preparation purposes.

Prior to Cure Coat: Upon final finishing of concrete surfaces, the slab is typically clean and ready to accept cure coat. It is the contractor's responsibility to determine whether cure coat application is to occur before or after early entry, saw cutting of control joints. If the cure coat occurs after saw cutting, be sure to first clean any residual dust through use of duct extractor, vacuum, or similar method.

Prior to Bondbreaker Application on a casting surface cured with EucoTilt: EucoTilt bondbreaker application can be applied directly over EucoTilt cured surfaces. This is the optimal surface condition for subsequent bondbreaker applications. Remove all dust, dirt, standing water, or other contaminants from the casting surface using an air blower, broom, or squeegee as necessary.

Prior to Bondbreaker Application on a casting surface pre-sealed and cured with a compatible Euclid densifier: EucoTilt can be directly applied to casting surfaces previously cured and/or pre-sealed with a properly applied compatible Euclid densifier. Ensure that the densifier is dried prior to application of bondbreaker.

Prior to Bondbreaker Application on a casting surface cured with curing blankets/polyethylene sheets: Immediately after removal of wet curing blankets or polyethylene sheets, cured surfaces shall be cleaned of all salt deposits. These salts, prior to reaction with carbon dioxide, can be easily dissolved in water. Use a low-pressure water hose with spray nozzle and rinse cured surfaces clean and squeegee or air blow/vacuum water from surface, ensuring all salt deposits have been removed. **Note:** *If not removed from casting surfaces, salt deposits can cause surface defects and unacceptable mottling/staining of concrete surfaces.*

Prior to Bondbreaker Application on an existing casting surface: Verify that existing casting surface is free of any previously applied products, to include, but not limited to, curing compounds, bondbreakers, densifiers, or cure & seals. If any residual product remains, remove completely prior to any EucoTilt application. Follow recommendations from manufacturer of the residual product for removal. If unknown, utilize an appropriate dilution of EUCO CLEAN & STRIP, scrubbing machines (or ride on power trowels) with nylon-grit scrub brushes. Once surface is cleaned, squeegee off excess residue/material, rinse thoroughly, and squeegee dry. It is recommended to initiate dilution at 5:1 (water to EUCO CLEAN & STRIP) and adjust as necessary.

EQUIPMENT

Recommended application requires use of tank type/handheld pump sprayer, electric power sprayer, or battery-operated power sprayer capable of maintaining minimum pressure of 40 psi for spraying. Ensure that sprayer components, to include gaskets and hoses, are compatible and chemically resistant to low VOC and exempt solvents used in EucoTilt. Optimal uniform coverage is achieved through use of proper spray tips that are flat fan type, 80° spray angle, and flow rate of 0.3 to 0.5 gal/min (8003 LP, 8004 LP, or 8005 LP tip size). Project specifics, such as concrete mix design, use of pozzolans, slab thickness, and finished techniques, as well as site climatic conditions during concrete placement, will dictate optimal flow rate. It is recommended that the sprayer be equipped with a CF Valve or pressure gauge to ensure consistent minimum application pressure at 40 psi.

Sprayers used successfully include the Chapin 19069 Xtreme Stainless Steel Concrete Open Head Sprayer or the SMK Elite G Battery Powered Sprayer (adaptors available for DeWalt 20V Slide On, Milwaukee 18V Slide On, or Makita 18V Slide On batteries). Call spray pump manufacturer for verification of appropriate product selection, compatibility, and chemical resistance.



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MIXING

Prior to each use, stir EucoTilt for 30 seconds using manual/non-powered equipment (such as a hand-crank drum agitator, or simply rolling the drum on its side).

APPLICATION PROCEDURES

Prior to project use, perform appropriate site tests and/or mock-ups to verify performance of product, determine application rates and quantities required, and validate application procedures for project specific conditions to achieve desired results.

Pozzolans, such as fly ash or slag, used in the slab and/or tilt panel mix design, may impact coverage rates and application procedures of EucoTilt. Contact Euclid Chemical Company for technical assistance if pozzolans are used on your project.

The use of pozzolans OR dry, hot, and/or windy conditions, for example, will typically result in more porous slab surfaces and will require more EucoTilt product (ie: heavier application rates).

Coverage rates listed are approximate. It is the contractor's responsibility to verify that the coverage rates and overall application of cure coat and bondbreaker is appropriate for the project's variables (concrete mix design, use of fly ash/pozzolans, curing methods utilized, thickness of casting slab, finish of concrete, etc...) and site conditions (climatic or otherwise, etc...). If there are any questions or concerns, contact Euclid Chemical Company for technical assistance.

Cure Coat Application: Upon completion of final finishing of casting surface, apply cure coat to point of rejection and uniform surface film holdout. If the site's climatic conditions are excessively dry, hot, and/or windy during concrete placements, it may be necessary to consider alternative curing methods (such as water/wet curing) as recommended by ACI. Use of evaporation retardant, EUCOBAR, is especially recommended in these conditions.

Cure Coat Coverage Rate (one application): 200 to 400 ft²/gal (4.9 to 9.8 m²/L)

Bondbreaker Application: Apply bondbreaker to properly cured, smooth, dense casting slab. Remove all dust, dirt, standing water, and other contaminants from casting surfaces. If membrane forming curing compounds, other than EucoTilt, are used to cure casting surfaces, they must be removed prior to bondbreaker application. Optimal results are achieved when successive, uniform, light coats of EucoTilt are applied at right angles to the previous coat. Do not allow puddling or ponding of material. Apply all bondbreaker coats prior to installation of reinforcing steel and lifting inserts, embeds, and hardware. Allow each bondbreaker application to dry prior to the next coat. Apply a minimum of 2 successive coats until the casting surface appears uniformly dark in color for at least 2 to 4 hours after the last coat. Treated casting surfaces that are light in color are indications of a more porous slab condition and may necessitate reapplication in those areas. If these light areas persist, wet/mist the light-colored areas with water to fill concrete pores, squeegee off excess water, and immediately reapply EucoTilt. If the concrete panel placement is delayed more than 2 weeks beyond final bondbreaker application, it may be necessary to reapply bondbreaker. Verify bondbreaker application and reapply if needed. An adequate application of bondbreaker is indicated by these factors:

- The casting surface appears uniformly dark in color for at least 2 to 4 hours after last bondbreaker coat/application.
- A dry, soapy feel to the touch across the entire casting surface.

Do not under or over apply bondbreaker. Under application can lead to panel sticking and over application may result in retardation of panel skin, dusting of panel face, surface defects and/or discoloration.

Bondbreaker Application: for casting slabs cured with EucoTilt, wet cured, or existing slabs	
1 st Coat	400 to 800 ft ² /gal (9.8 to 19.6 m ² /L)
2 nd Coat	400 to 800 ft ² /gal (9.8 to 19.6 m ² /L)
Bondbreaker Application: for casting slabs previously cured and/or pre-sealed with a Euclid liquid applied densifier	
1 st Coat	600 to 1,000 ft ² /gal (14.7 to 24.5 m ² /L)
2 nd Coat	400 to 1,000 ft ² /gal (14.7 to 24.5 m ² /L)



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CLEAN-UP

- Clean tools and application with mineral spirits, acetone, xylene, or similar. Ensure all equipment is cleaned after each use.
- With Proper application and adequate UV exposure to oxidize residual bondbreaker, the casting surfaces and tilt-up wall panels will not require cleaning.
- Residual Bondbreaker –
 - If residual bondbreaker remains on casting slab surface, utilize an appropriate dilution of EUCO CLEAN & STRIP and scrubbing machines (or ride on power trowels) with appropriate nylo-grit scrub brushes. Once surface is cleaned, squeegee off excess residue/material, rinse thoroughly, and squeegee dry. It is recommended to initiate dilution at 5:1 (water to EUCO CLEAN & STRIP) and adjust as necessary. Equipment used successfully to remove residual bondbreakers includes Tennant Floor Scrubber/Cleaning Machines with recommended brushes or Ride-On Power Trowels equipped with Wagman Revolution Rotary Brushes, or similar.
 - If residual bondbreaker remains on tilt wall panels, pretreat areas to be cleaned with an appropriate dilution of trisodium phosphate (TSP) and water. It is recommended to initiate TSP solution at ½ lbs TSP for every 1 gallon of water. Allow cleaning solution to marinate/remain on the surface for approximately 30 minutes before rinsing with a 4000 psi pressure washer. If post applied coatings are being applied to tilt panel surfaces, please consult coating manufacturer for their surface preparation recommendations as well.

PRECAUTIONS/LIMITATIONS

- Not recommended for application to broom finished or otherwise porous, rough-finished casting surfaces.
- Keep EucoTilt products from freezing.
- Stir EucoTilt WB for 30 seconds prior to each use, using manual/non-powered equipment (such as a hand-crank drum agitator, or simply rolling the drum on its side)
- Do not use pressure washers to clean casting slab surfaces after EucoTilt has been applied.
- The use of a deflection board is necessary during concrete placement to prevent scouring of the casting slab.
- Pozzolans, such as fly ash or slag, used in the slab and/or tilt panel mix design, may impact coverage rates and application procedures of EUCOTILT. Contact Euclid Chemical Company for technical assistance if pozzolans are used on your project.
- Perform appropriate site tests and/or mock-ups to verify performance of product, determine application rates and quantities required, and validate application procedures for project specific conditions to achieve desired results.
- Not recommended for application when casting surfaces are frozen (32 °F [0 °C] or below) or expected to freeze prior to complete drying of applied EUCOTILT.
- Not recommended for application over any other manufacturer's post applied products, including, but not limited to, curing compounds, bondbreakers, densifiers, and cure & seals.
- Verify compatibility of any Euclid Products used in combination/conjunction with EUCOTILT prior to their application.
- If the concrete panel placement is delayed more than 2 weeks beyond final bondbreaker application, it may be necessary to reapply bondbreaker. Verify bondbreaker application and reapply, as required, prior to concrete placement.
- Not recommended for application in mist, rain, or when rain is expected prior to adequate drying and sufficient reaction of bondbreaker coat with concrete casting surface. Applications subjected to these types of moisture exposures will require reapplication.
- If wet cure methods such as cellulose or synthetic curing blankets or polyethylene sheets are used, clean casting surfaces of all salt deposits on slab surface prior to application of bondbreaker. Salt deposits can result in surface defects and unacceptable mottling/staining of concrete surface.
- Use appropriate spray equipment and spray tip size to ensure a uniform, continuous application of bondbreaker.
- It is the contractor's responsibility to verify that the coverage rates and overall application of cure coat and bondbreaker is appropriate for the project's variables (concrete mix design, curing methods utilized, use of pozzolans, etc...) and site conditions (climatic or otherwise, etc...). If there are any questions or concerns, contact Euclid Chemical Company for technical assistance.
- In all cases, consult the Safety Data Sheet before use.

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WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCO MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.