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DAYTON SUPERIOR

Maxi Tilt™ with Dye

Water Based Bond Breaker

TECHNICAL DATA SHEET

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DESCRIPTION
Maxi Tilt with Dye is a liquid, V.O.C. compliant, water-based, reactive and membrane forming bond breaker for use in tilt wall construction. Maxi Tilt with Dye is a special formula of polymers and propriety ingredients designed to provide clean, easy lifting of tilt panels. Maxi Tilt with Dye has a fugitive dye for ease of visual inspection during application.

USE
Maxi Tilt with Dye is designed to allow for easy lifting of tilt wall panels from properly designed, finished and cured concrete casting beds.

FEATURES
- Water-based
- Very low V.O.C.
- Panels lift cleanly
- Minimal panel residue
- Resists construction foot traffic
- Meets the moisture retention properties of ASTM C 309 when applied to a steel troweled surface.

Drying time:
Approximately 2 hours at 70°F (21°C).
Cooler temperatures, higher humidity and thicker bond breaker coats will extend the dry time.

Note:
Prior to application, read, and follow all current (verify literature is current) literature instructions, limitations, and precautions in this data sheet, on the SDS, and on the label of the container prior to use.

VOC
Less than 100 g/L. Compliant with all Canadian and U.S. VOC regulations for Bond Breakers including Federal EPA, OTC, LADCO, SCAQMD & CARB.

Estimating Guide
Cure Coat: 100*-200 sq. ft./gal (2.4, 4.9 sq. M/L) * meets ASTM C 309 moisture retention requirements on a steel troweled surface.

Bond Breaker Coats:
First Coat: 400 sq. ft./gal. (9.8 sq. M/L)
Second Coat: 550-700 sq. ft./gal (13.5-17.2 sq. M/L)

The above recommended coverage rates are averages based on average site and concrete conditions.

Complete and uniform coverage of the casting slab varies considerably with variations in the placing, curing, concrete mix design, density, finishing, and site specific ambient conditions.

It is not possible for the recommendations provided by this data sheet to accommodate and account for all variables associated with the coverage rate and application of the bond breaker. It is the contractor's responsibility to verify that the applied coverage rates and overall application of the bond breaker is commensurate with the specific site variables and conditions.

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		Gallons	Liters
273088	Pail	5	18.93
273087	Drum	55	208.20

STORAGE
The Maxi Tilt with Dye should be stored in a tightly secured original factory container. Store drums in the horizontal position to prevent moisture accumulation on the drum head. Keep from freezing. Shelf life in unopened containers is 9 months from the date of manufacture.

Concrete Mix Design:
The instructions provided by this technical data sheet apply to general average site conditions such as concrete mix designs, finishing techniques, and site ambient conditions.

Test applications should always be made by the end user/purchaser prior to overall use of the bond breaker. This is at a minimum necessary to verify that the amounts of bond breaker purchased and anticipated to be applied is sufficient to result in the correct application coverage rates and end performance of the product based upon the specific site conditions.

The concrete casting slab, waste slabs and tilt wall panels must be properly designed, finished and cured in accordance with industry standards and guidelines including those of ACI and TCA.

APPLICATION

Surface Preparation:
The casting bed should be free of all foreign material, salts, laitance and the Maxi Tilt with Dye protected, while drying, from all contaminants or particulate matter (i.e., dust, dirt and the like).

Mixing:
Thoroughly agitate the Maxi Tilt with Dye prior to each use. Each bond breaker drum will be supplied with an integral drum mixer. Use only the built in drum mixer to achieve proper mixing. Proper mixing of the bond breaker prior to use is extremely important. The bond breaker drum must be in a vertical position to effect proper mixing. Vigorously mix each drum continuously for a minimum of 3 minutes. Re-mix if left to set overnight.

Failure to properly mix and keep the bond breaker mixed over time will result in sticking panels.

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Spray equipment:

The Maxi Tilt™ with Dye Bond breaker must be applied by a high quality "low-pressure pump-up type sprayer" such as manufactured by Hudson, Chapin or others. The tip size must be able to produce a well atomized spray pattern. The sprayer must be kept under sufficient pressure to correctly atomize the Maxi Tilt™ with Dye without streaming, tailing, or spitting. A 1/2 (0.5) gal. /minute tip is generally recommended for most applications.

The use of an improper sprayer, dirty sprayer, lower than adequate pressures or wrong tip can result in an uneven application, and either over or under application. For improved application consistency and reduction in labor, please utilize the Dayton Spray-Pro (Item # 309233 or 309232) power spray system.

Cure Coat:

Concrete casting slabs must be smooth, dense, sound, of adequate thickness, and well cured. Improper or inadequate curing or finishing will increase slab permeability and decrease bond breaker effectiveness.

It is recommended per ACI & ASTM to cure the concrete in accordance with ASTM C-309. Apply the cure application IMMEDIATELY after completion of troweling and final finishing and after the surface water has disappeared.

Cure Coat: Maxi Tilt with Dye can be used for curing and meets ASTM C-309 when the proper coverage rates are followed. It is recommended per ACI & ASTM to cure the concrete in accordance with ASTM C-309. The use of Cure & Seal 309 J18, Cure & Seal 309 EF or other approved Dayton Superior water-based curing compound meeting ASTM C-309 can be used, see TDS for recommended application rates.

When using a Dayton Superior water-based cure and seal, apply per the products directions. Contact Dayton Superior Technical Services for additional information and recommendations.

Special Note: Curing membranes must be allowed to fully dry prior to application of the bondbreaker coats.

First Bond Breaker Coat:

Just prior to placing the reinforcing steel, and within two weeks of pouring the panels, spray apply the first bond breaker application of Maxi Tilt™ with Dye at 400 sq. ft./gal. (9.8 sq m/L) to the point of rejection. Spray at right angles to curing compound spray pattern. Specific site conditions may dictate coverage rates other than the normal recommended coverage rates. Adjust the actual applied rates accordingly.

Second Bond Breaker Coat:

Wait until first coat dries, approximately 2 hours depending on temperature & humidity, and apply a second coat at right angles to the previous coat. Coverage for the second coat will typically be 550 to 700 sq. ft./gal. (13.5-17.2 sq m/L). If light or white spots appear within 10-40 minutes after spraying, those areas are extra porous and should be fogged with water followed by a reapplication of the Maxi Tilt™ with Dye at 550 to 700 sq. ft./gal. (13.5-17.2 sq m/L). Specific site conditions may dictate coverage rates other than the normal recommended coverage rates. Adjust the actual applied rates accordingly.

The number of bond breaker coats and coverage rates necessary to achieve a complete uniform coverage is highly dependent on the concrete casting slab mix design as well as its inherent porosity, finishing techniques, and other related site specific ambient conditions. Adequate bond breaker application is in large part dependent upon development of a uniform soap like feel of the bond breaker treated surface as well as beading of water. Bond breaker can also be checked by rolling up a small ball like amount under thumb pressure.

Extremely porous or rough casting slabs will necessitate successive additional coats of bond breaker to achieve a consistent uniform membrane of the correct coverage rate and membrane thickness. Extremely porous or otherwise absorptive slabs can also be fogged with water to a saturated surface dry (SSD) condition prior to application of bond breaker

BOND BREAKER TEST

To verify the integrity of the bond breaker coat, sprinkle water on the casting bed (water should bead up as on a freshly waxed automobile). The applied dried material should have a soap like feel uniformly over the substrate. The application should appear uniform and continuous, with light areas requiring re-application. Failure to verify proper uniform application and coverage rates can result in panel sticking. Testing must be performed over a large enough surface area in an adequate testing frequency to provide accurate and meaningful results.

It is entirely the contractor's responsibility to verify that the bond breaker has been evenly and uniformly applied at the recommended application/coverage rates given the various concrete mix design, densities, finishes, and porosity conditions on each project

HOT WEATHER PROCEDURES

In hot weather, the casting slab must be flooded with water to reduce its porosity and cool it down prior to the first bond breaker application of Maxi Tilt™ with Dye. Thoroughly saturate the slab with water, and then squeegee off the excess, removing all the free standing water from the surface, then immediately proceed with applying the first application of the Maxi Tilt™ with Dye.

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Delaying the application of the bond breaker after wetting of the slab will result in over penetration and lessen bond breaker effectiveness, and panel sticking may result. Prior to concrete placement wet down the casting slab with cool water; excessive water should be blown out immediately prior to the concrete placement. Take care when placing concrete to avoid abrading or scouring the bond breaker on the casting bed as braded or scoured spots or areas may result in stuck panels. Discharge the concrete into previously placed fresh concrete.

CLEAN UP

For tools and equipment, use warm, soapy water. After the product dries, solvents such as xylene or mineral spirits may be necessary to remove the product.

LIMITATIONS

FOR PROFESSIONAL USE ONLY

Avoid using bond breaker that may have frozen.
Avoid contamination by storing containers in clean, dry area and keeping lids tightly sealed
Do not spray on reinforcing steel
Never apply bond breaker unless it has been thoroughly and properly mixed before use. Bond breaker should be re-mixed at the start of each day
Not recommended for application to broom finished or otherwise rough, porous or weak unsound concrete
Do not apply in rain or if rain is forecast within 12 hours of the application
Casting slab surfaces exposed to rain may require reapplication of the bond breaker at a coverage rate at 550-700 sq. ft./gal (13.5-17.2 sq m/L)
Do not apply below 40°F (4°C) or when ambient temperatures are expected to fall below 40°F (4°C) within 12 hours
Not recommended for application to casting slab concrete that has been cured with curing blankets or plastic coverings without first removing the salts from the concrete's surface before application of the bond breaker. Surface salts can result in surface defects
Application of the bond breaker as a cure coat during cool weather or when a moisture barrier has been used will result in longer than normal drying times
Application in two thin coats rather than one thick coat will reduce the dry time
Properly applied, casting beds and tilt panels can normally be coated or sealed after appropriate cleaning and or surface preparation of the surfaces. The manufacture of the coating, paint, sealer, adhesive or other subsequent treatments should be consulted for specific substrate cleaning and preparation requirements and instructions prior to painting. The Tilt-Up Concrete Association (TCA) Tilt Tips "Painting Tilt-Up Panels" document should be understood and followed if painting of the tilt panels is anticipated
Over-application can lead to excessive transfer to the panels and potentially cause problems with subsequent paint adhesion.

A mock up test panel of any subsequent application of paint/coatings or other membrane forming treatments should always be applied and tested to verify proper coating adhesion and adequate cleaning and surface preparation of the tilt panels
Improper concrete mix designs, overly porous or weak casting slab concrete, failure to properly finish and/or cure the concrete and/or uneven or improper application and insufficient mixing of the bond breaker can lead to panel sticking.

PRECAUTIONS

READ SDS PRIOR TO USING PRODUCT

- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

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Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

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