



SUBJECT: Base Coats Exposed to Moisture Prior to Application of Finish

Dryvit specifications require the following ENVIRONMENTAL CONDITIONS for installation of Dryvit Outsulation Systems:

1. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are dry.
2. Application of wet materials shall be at a minimum ambient temperature of 4 °C (40 °F), 7 °C (45 °F) or 10 °C (50 °F) depending on product, and rising. These temperatures shall be maintained for a minimum of 24 hours (48 hours for Ameristone™) thereafter, or until completely dry.

The above referenced time / temperature requirements are valid only for finishes applied to a dry base coat. Even after it initially dries, the base coat may be exposed to moisture prior to application of the textured finish. This moisture can come from a variety of sources, i.e. precipitation from rain or snow, dew, and frost. If the wall is not properly detailed, flashed, capped, or the EPS not properly back wrapped at terminations and penetrations, moisture can migrate to the base coat from behind.

When the base coat has been exposed to any moisture, it must be allowed to dry prior to application of any finish.

Exposure to direct sun can help dry out a moisture saturated base coat. Full sun exposure will rapidly increase the surface temperature of the base coat from 4 °C (40 °F) or less, to 37.8 °C (100 °F) or higher. If a base coat has become saturated from outside moisture and has not been dried out from full exposure to direct sunlight, it is highly likely that the base coat is too wet for application of finish. This is why shaded elevations, with only partial direct sun exposure, are more susceptible to wash-off and blistering problems. Use the following methods to determine if base coat exposed to moisture is suitably dry for application of finish:

1. The most accurate moisture meter uses a plaster/concrete reference scale with moisture readings from 0-100. This is the #2 scale setting on the Delmhorst Model BD2100 (www.delmhorst.com/products_floor.html). Morning readings of a base coat on a shaded elevation can vary from area to area, and decrease as humidity decreases and areas are exposed to sun. Elevations near trees, dense foliage will show much higher readings. When taking readings, be careful not to push the pin into the EPS. Moisture readings should be below 40% prior to application of any Dryvit finish. This is approximately 16-17% on moisture meters using a wood scale.
2. Compare the color of the suspect damp base coat area to a reference sample of the same base coat (mixed with the same cement used on the job) that has been kept indoors and has never been exposed to any moisture. Base coat that has been exposed to precipitation or heavy dew is visibly darker. CAUTION! Base coats that have been exposed to moisture are also very likely to exhibit efflorescence, which compounds the adhesion problems. The darkened appearance of a damp base coat is often obscured

by a layer of efflorescence. The color check is not appropriate when efflorescence is present. Efflorescence should be removed according to our published instructions.

3. Check the surface temperature of the suspect base coat area with a hand-held infrared surface temperature instrument. (An example is the Raytek Mini Temp MT4; MSRP \$89.00. Google: Raytek MT4 for sales and pricing information.) If the temperature is below 27 °C (80 °F), it means that it has not been warmed by direct exposure to sunlight and evaporation of water is proceeding at a very slow rate. CAUTION! Never apply finish to a base coat that is “steaming” from initial exposure of a wet base coat area to direct sunlight. Let it dry out.

Recognition of saturated and damp base coat conditions prior to application of textured finish can alleviate most problems that are incorrectly attributed to quality. The overnight dry time period for drying of finishes is greatly extended when the application is done over a damp base coat, during low temperatures and/or during times of high humidity. The finish may appear dry, but the adhesion can be very weak because the finish never wet out the base coat. This is due to the fact that a portion of the moisture from the finish needs to be absorbed into the base coat to promote proper adhesion and curing of the finish. A damp base coat inhibits suction, and hence prevents the finish from developing adhesion to the base coat. The enlargement and growth of blisters is less for textured finishes with wormhole or rill effects where the finish is not thick. The chemistry of all DPR finishes is the same, but differences in thickness will render varying degrees of drying potential and susceptibility to blistering when the finish is exposed to precipitation and/or applied over damp base coat.

Use of Rapidry DM™ base coats is highly recommended under damp conditions because it may be possible to apply finish the same day as the base. Refer to DS456 and DS457 for more information on Rapidry DM™ products. This will minimize concerns with moisture exposure and proper drying of base coat prior to application of finish. Blistering will not be an issue if the base coat is dry and free of contaminants when the finish is applied.

If you have any questions regarding this document, please contact Dryvit at 800-556-7752, ext. 9.

R0:10-14-09