



SUBJECT: Drying Conditions for Dryvit Finishes

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.

These are the minimum conditions to assure resistance to wash-off from direct rainfall exposure and also to assure long-term performance. All Dryvit finishes are water-based and require the evaporation of water for drying to proceed. Any conditions that retard the evaporation of water, such as low temperature and high relative humidity, will prolong the time required for drying. When application is directly under unguttered roof areas, allow more drying time to resist wash-off. Concentrated run-off of rain from unguttered roofs or scuppers can deliver extremely high water pressure to specific areas of a wall.

At high relative humidity, the time required for drying will be prolonged, no matter what the temperature. When temperatures fall rapidly in the late afternoon or evening, the formation of dew on wall surfaces can occur under moderate to high relative humidity conditions. A light deposit of dew will completely inhibit the drying of the Dryvit finish until the dew evaporates, and may affect color. Please be aware that dew will completely saturate a base coat on shaded elevations and that the base coat will often remain saturated until exposed to bright, direct sunlight for over two hours. Protection of materials from precipitation includes EPS board. If the EPS is wet, it must be allowed to dry out prior to application of the base coat. EPS just above grade level is an area to inspect carefully.

Most wash-offs and blister problems involve application of the finish over a base coat that is only partially dry. The wash-off or blister will occur in areas where finish is applied over a saturated or damp base coat. It is especially important to apply finish over a dry base coat under marginal drying conditions. See Base Coats Exposed to Moisture Prior to Application of Finish document for more information on damp base coats.

Finish must never be applied over heavy efflorescence. See Efflorescence of Cementitious Base Coat document for dealing with efflorescence. When Dryvit finishes are applied directly over CMU or concrete, very close attention must be paid to surface temperature and moisture content. Wet areas of a cementitious base coat are usually readily visible, but wet concrete is less obvious. When concrete and CMU are cold or frozen, they do not warm as rapidly a cementitious base coat when exposed to direct sun. Hand-held infrared surface temperature thermometers are strongly recommended to check surface temperatures when application is done in the shade at lower temperatures. The cost is comparable to a quality electric drill. Shaded elevations may have surface temperatures 9.5°C (15 °F) below the air temperature, which greatly increases the probability of dew formation on that elevation.

Dryvit Field Service personnel can provide suggestions on installation of protective enclosures. Always allow more time for drying in a protective enclosure because all positive drying effects from natural breezes are eliminated, and also because a high relative humidity may be trapped. Relative humidity increases inside the enclosure as water from the applied finish evaporates. Recent evaluations have demonstrated that using a moisture meter is a reliable method for determining whether a finish is dry. 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). Readings below 20% indicate that the finish is sufficiently dry to remove the protective enclosure and expose the finish to moisture. This is equivalent to a 13% moisture reading on moisture meters using a wood scale.

Fuel burning space heaters inside an enclosure produces combustion byproducts that can asphyxiate (carbon monoxide) workers. Even if no workers are present, the finish can also become contaminated from byproducts. Propane heaters may produce high relative humidity levels in an enclosed area. Manufacturers of oil-fired heaters specify that fresh air must be supplied when used in an enclosed area. Electric heaters provide heat with less air quality problems inside an enclosure. OSHA regulations related to the use of heating equipment during construction can be found in 29CFR, Part 1926 Section 150 Fire Protection; Section 151 Fire Prevention; Section 152 Flammable and Combustible Liquids; Section 153LP Gas; Section 154 Temporary Heating Devices; and Section 55 Gases, Vapors, Fumes, Dusts and Mists. The Dryvit Training Manual, Section 14 Miscellaneous 5; Winter Application of Dryvit Products; provides more detailed information on tenting and heating.

Dehumidification systems may provide positive benefits for ensuring positive drying of Dryvit materials. Panel plants and yards may be best suited for use of dehumidification equipment.

TIP: Whenever possible, store finishes at 21°C (70 °F) or above prior to application when the outdoor temperature is 10°C (50 °F) or below. The speed of drying will be significantly increased, reducing the risk for wash-off.

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

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