

## Technical Memorandum

### Cold Weather Application of DELTA® Self-adhering Membranes

October 2019 Edition

This information is applicable for the following membranes:

- DELTA®-VENT SA
- DELTA®-STRATUS SA
- DELTA®-FASSADE SA

DELTA® Self-adhering (SA) membranes have a recommended application temperature of 40° Fahrenheit (5° Celsius) or above per our Technical Data Sheets.

It should be noted that, as with any application, the installer is ultimately responsible for ensuring effective adhesion. Please refer to the Technical Data Sheet and Installation Instructions for the DELTA® SA membrane being used for complete information.

The adhesive on DELTA® SA membranes is a pressure-sensitive adhesive. As temperatures drop, all adhesives change in performance characteristics. However, the in-situ performance characteristics of the membrane are not affected in any way. DELTA® SA membranes will continue to provide the high performance expected, regardless of the temperature at which they were adhered.

Best practices are always recommended: Installation at temperatures of +40° F (+5° C) and above will yield optimum adhesion. For installations



below +40° F (+5° C) the following application procedures are recommended to obtain effective adhesion:

- Keep DELTA® SA membrane rolls and accessories stored at temperatures above +40° F (+5° C) until the time of application.
- Substrate must be clean, dry, and free of frost and ice.
- Use DELTA®-ADHESIVE LVC or DELTA®-ADHESIVE to prime substrates and aid in adhesion.
- Wood substrates must meet USDA recommendations for dry lumber at time of use (U.S.D.A. Forest Service "Moisture Content of Wood" research note FPL – 0226 1973 table 1)

- Use a rubber hand roller to apply pressure to the membrane during installation. This is a standard recommendation for all installations, but it is especially important during cold weather installations.
- Additional time and pressure should be focused on details, laps and perimeters.

As the temperatures get colder, it is more critical to adhere to the recommendations noted above. Periodic reviews (weekly or as needed) of the product application during the colder months are recommended to help ensure effective adhesion.

Because the condition of the substrate will have a significant impact on adhesion, standard surface preparation and considerations must be followed as listed in each of the Installation Instructions for DELTA® SA membranes:

#### Substrate Conditions and Preparation

- Appropriate substrate conditions are critical to obtain proper adhesion. Ensure surfaces are ready for product installation and are in accordance with these installation instructions.
- All surfaces must be sound, dry, clean and free of dust, oil, grease, ice, dirt, excess mortar or other contaminants detrimental to the adhesion of the membrane.
- Ensure protrusions that may penetrate the membrane are removed from substrate. Mechanical fasteners used to secure substrate shall be set flush with substrate and secured into solid backing.
- If being applied to concrete or masonry substrates, fill voids, gaps and spalled areas in substrate to provide an even plane. Strike masonry joints full-flush.
- Curing compounds or release agents used in concrete construction must be resin-based without oil, wax or pigments.
- New concrete should be cured for a minimum of fourteen (14) days and must be dry prior to primer application.
- Not all product installations require the use of primer. However, in certain exceptions primer may be used to enhance adhesion. The ability of self-adhering membranes to adhere to a substrate may become compromised by irregular surface texture, chemical release agents, moisture content, dirt and debris, or even low temperatures or high wind conditions. An adhesion test is recommended to confirm substrate suitability.
- Adhesion enhancements are required when an assembly is unable to maintain a continuous and secure installation. Where enhanced adhesion is needed, Dörken Systems Inc. offers DELTA®-HF PRIMER (water-based, highly vapor permeable) (store and use at 40° F (5° C) and above), DELTA®-ADHESIVE LVC or DELTA®-ADHESIVE (cold weather) for surface preparation.
- Important: apply primers in thin coat. If primers are applied at a higher rate than recommended, it will not aid with adhesion. Always apply primers at recommended application rate.

