



TECHNICAL BULLETIN CP-09

**EUCOLASTIC SEALANTS: ASTM C 920
COLD WEATHER INSTALLATION RECOMMENDATIONS**

The following outlines procedures and recommendations for using Euclid Chemical Eucolastic sealants at temperatures lower than 40°F (4°C). At low temperatures, the cure rate of urethane sealants is slower and the presence of ice or frost on bonding surfaces becomes more likely. Both of these conditions can affect the overall cure, adhesion and ultimate performance of Eucolastic. The lowest recommended installation temperature for Eucolastic sealants is 0°F (-17°C).

A general rule of thumb is that for every 10° drop in temperature, the skin time and cure time will double.

The following guidelines should be followed when installing Eucolastic sealants in cold weather.

1. Warm Eucolastic cartridges/containers at room temperature for at least 24 hours prior to use. This is necessary to ensure adequate flow of the sealant during application.
2. Clean any dew, frost or ice from the substrate with a solvent such as MEK (methyl ethyl ketone), toluene, or xylene. Follow the precautionary instructions on the solvent container and MSDS for the safe use of these materials.
3. When required, Eucolastic Primer should be conditioned in a similar fashion. At temperatures lower than 32°F (0°C), Eucolastic Primer will take longer to dry. Care should be taken to ensure adequate primer dry time prior to sealant application.

Eucolastic 1NS and **Eucolastic 1SL** are one-part sealants that cure by reaction with moisture, yet their cure is also temperature dependent. Therefore, they will cure at a slower rate as the temperature drops. Additionally, dry, arid environments will slow the cure of these moisture-curing sealants.

In addition to temperature, the following conditions can affect the cure rate of Eucolastic sealants:

1. Freshly poured or placed substrates such as concrete, mortar, and EIFS should be given adequate time to cure prior to installation of Eucolastic sealants. The exception to this rule is Eucolastic 1SL, which can be installed when new concrete is as little as 24 hours old. Refer to the bulletin entitled "Eucolastic 1SL & Green Concrete" for more information.
2. The dew point is the temperature at which moisture in air can condense on surfaces. If the air temperature is below the dew point, substrates should be wiped with solvent to remove any condensation prior to primer or sealant application.
3. The major effect of wind chill is the accelerated cooling effect on substrates and sealants. This will directly affect the time available for surface preparation and sealant application. The application characteristics of cooler sealants (i.e. reduced flow rate) result in less efficient tooling or "wet out" of the sealant to the substrate.

The environmental conditions of every project should be evaluated on a day-to-day basis, as temperature, humidity, dew point, presence of frost, and wind chill can all affect the cure and overall success of a Eucolastic application.