



## Potential Winter Construction Challenges

*Precautions are needed on the construction sites to avoid potential challenges associated with cold and sunny winter weather conditions. Neglecting caution during cold and sunny winter weather can contribute to avoidable problems in a Sealant installation. Bond failure, cracking, shrinkage, etc.. are more likely to happen in winter installations. Adhesion is typically the last phase in the curing process. Winter installation concerns noted are likely not to be visible until after the spring thaw, which will likely be too late or costly and time consuming to correct.*

*Understanding the concerns and taking the following precautions in the winter, is usually far less costly and time consuming than coming back in six months to repair the results.*

### **Stay on schedule and follow these guidelines.**

- ❑ Substrate must be clean, dry, and frost free —always wipe surfaces to remove unseen frost. Do not use Xylene is cold temperatures.
- ❑ Be careful applying warm material on cold surfaces, because a thin layer of condensation will develop on the substrate, which will inhibit proper bond of the material to the substrate. Borderline winter installs will become an issue that could be prevented—talk to the Quality Department.
- ❑ Protect all sealants from freezing. Do not store materials outside or in an unheated truck (on-site or off-site). Most products need to be stored above 50°F.
- ❑ Generally, most sealants will need +40°F and rising until proper cure (contact the manufacturer for temperate and length of time above freezing for proper cure). Always evaluate overnight temperatures and wind. There are special “COLD” temperature (15°F) sealants—review with the manufacturer and product data.



- ❑ Do not apply if rain is expected within the cure time of the sealant. Discuss with the manufacturer for timing required to prevent the material from washing off the building or change colors.
- ❑ Request from the manufacturer the sealant cold weather technical bulletins and installation instructions.
- ❑ If temporary heat is being used on the interior of the building, make sure it is INDIRECT heat. (**SEE AECOM TEMPORARY HEAT BULLETIN FOR MORE INFORMATION**)
- ❑ How will the material be kept above the required temperature during the installation.
- ❑ Pay attention to elevation exposure (south and west) because of slow winter cure and heat from the sun, heating up the air behind the sealant, which will likely create bubbles in the sealant because of the expanding air into the uncured sealant.