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## Using Pecora Sealants in Expansion Joints Over 1" Wide Technical Bulletin PEC 169

Applying sealants in horizontal & vertical joints over 1" wide is not uncommon and can be successfully performed provided that the proper installation procedures are followed. Factors such as sealant depth, cure time, & application temperature must be considered when applying joint sealants in wide joint applications.

The foremost concern when sealing expansion joints over 1" in width is sealant "slump" or "sagging". Excessive sealant slump or sag in an expansion joint may cause improper bead configuration, inadequate sealant thickness in the completed joint & an unacceptable appearance. Joints over 1" in width are more susceptible to slump or sagging due to the increased sealant volume required to fill the joints.

### Wide Joint Installation Guidelines

#### 1. Sealant Depth & Backing

- In joints wider than 1/2" (12 mm) but not exceeding 2" (50 mm), the sealant depth should be maintained at 1/2" (12 mm) at the center of the joint (for traffic applications see Pecora Technical Bulletin #104).
- In joints ranging from 2" to 3" in width, the sealant depth should be maintained at 3/4" (19mm) at the center of the joint (for traffic applications see Pecora Technical Bulletin #104).
- For joints wider than 3" (50 mm), a mechanical preformed joint system such as Pecora Dynaspan (traffic applications) or preformed silicone profiles such as Pecora Silspan (architectural applications) should be considered.
- Appropriate sealant backing such as backer rod installed at 25% compression must be utilized in order to control sealant depth. A compressed, tight fit of the backer rod is critical in order to minimize backer rod movement which could increase the possibility of sealant slump.

#### 2. Cure Time

- Extended cure times can be expected when applying single component moisture cure sealants in joints over 1" in width due to the increased sealant depth & total sealant volume (full cure can take up to 14 days).
  - Open cell backer rod which allows ambient moisture to pass through the backer rod for faster cure can be utilized with single component sealants.
- Cure times of multi-component sealants will not be affected.

#### 3. Application Temperatures

- Elevated ambient temperatures (above 90°F) at time of application can lower the sealant viscosity and result in sealant slumping or sagging.
  - Increased substrate surface temperature caused by direct exposure to radiant heat (direct sunlight) should also be avoided.
- If scheduling permits, precautions such as applying the sealant in the late afternoon when temperatures are falling are recommended.

Pecora recommends performing a field mock-up of the wide joint sealant installation in order to ensure no sealant slumping or sagging will occur. Mock-ups should be performed at each elevation, in particular, the building's Southern exposure due to the increased radiant heat (direct sunlight) exposure at that elevation.

If sealant sagging/slumping is unavoidable due to on-site conditions, Pecora recommends installing the sealant in multiple "lifts". Please contact the Technical Service Dept for more information on this installation procedure.

For further information and sealant application recommendations please contact the Pecora Corporation Technical Services Group at 1-215-723-6051.