

TECHNICAL BULLETIN

MOISTURE AND DELAMINATION

Choosing the right joint sealant technology, based on application and performance needs, is critical, but sealant products alone cannot prevent all issues. Installers must consider building materials and how they are manufactured, handled, stored, and installed. Both natural and composite materials are susceptible to expansion, contraction, and in some cases, deformation – a result of moisture and temperature fluctuations. If not properly managed, these variables may lead to issues including primer, paint, and sealant debonding, resulting in poor joint performance and failure.



To prevent moisture related issues, consider the following material and application fundamentals.

- **Purchase High Quality Materials.** Building materials should reach appropriate moisture levels prior to factory priming or finishing. Premature primer, paint, or stain delamination may indicate improper finishing.
- **Check Moisture Level.** Use of a moisture meter is recommended to verify appropriate moisture levels (i.e., 9-14% for exterior wood products). Know your substrates by referring to manufacturer instructions and local code for appropriate moisture levels.
- **Back Prime** natural-wood trim and cladding to reduce backside moisture absorption. Moisture often travels down the WRB and may be drawn into unfinished substrates, making them susceptible to deformation and excessive movement during temperature fluctuations.
- **Ensure Drainage Plane** to avoid trapped water or moisture that may wick into materials.
- **Design and Construct Proper Joints.** Review manufacturer recommendations for gap, spacing, and design requirements, then select and apply sealant with matching performance capabilities. For additional support on selecting the right sealant, read [Choosing A Construction Sealant Technology](#) or call 1-800-624-7767 for assistance.
- **Remove Surface Contaminants.** Surfaces should be clean, dry, and free of all contaminants, such as old sealant/caulk, dust, grease, and any other material that may interfere with sealant bond formation.

Henkel recommends installers familiarize themselves with all building materials used as some are more stable than others and require different levels of preparation prior to and during installation. Always seek expert advice from manufacturers, local building code, and building science experts.

Combining the right sealant technology with proper preparation and application techniques will often prevent moisture related issues such as delamination or other joint failure. Henkel offers sealant technologies within its brand portfolios that meet a wide variety of application and performance needs. Go to ositough.com, loctiteproducts.com, gesealants.com, or lepage.ca to learn more about these solutions.

DISCLAIMER The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Henkel recommends purchasers/users should test the products to determine acceptable quality and suitability for the intended use. All adhesive/sealant applications should be tested under simulated or actual end use conditions to ensure the adhesive/sealant meets or exceeds all required project specifications. Since assembly conditions may be critical to adhesive/sealant performance, it is also recommended that testing be performed on specimens assembled under simulated or actual production conditions.