

Adhesive Storage and Shipment

XL Brands standard adhesives bear a white sticker on the boxes, pails, or cases (if one gallons). On the sticker is printed both the lot number and a date. For example: "2013119455 - 10/4/14". The date is the actual production date and the effective date for the shelf life of the product. The manufacturing date information for aerosol adhesives is printed on the bottom of the can. Shelf life is always calculated from the date of production in an unopened container. For most water-based adhesives, the shelf life for which the product is warranted is two years from the production date on the sticker. This shelf life time line from the production date also includes shipping or transport days.

XL Brands adhesives should be warehoused as delivered, stacked on wooden pallets (up to 48 pails or boxes per pallet) and shrink-wrapped. The adhesives should be stored in a cool dry location with controlled temperatures no lower than 40°F (4°C) or higher than 100° F (38° C). Ideal storage temperature is 65° – 95° F. Do not place containers in areas open to the elements, or without any temperature gauges in the area. Precautions should be taken to avoid storing the product in areas of temperature extremes, in direct sunlight, or where the packaging may get wet. Controlled indoor storage conditions are recommended to maintain the adhesive's physical properties and preserve the legibility of the packaging and labeling. Protect the containers from temperature extremes both in transit and in storage.

If the product is subjected to either temperature extreme, the end-user can notice differences in viscosity, texture, and spreadability, as well as drying and tack time. These adhesives are made from water-based polymers and are formulated to resist freezing by emulsion stability. Adding antifreeze such as alcohols and glycols are prohibited by the flooring adhesives VOC limitations as defined CRI Green Label Plus program, SCAQMD Rule 1168, and indoor air quality standards. The time it takes to freeze and the degree to which it is adversely affected varies with each product. Products stored below the standard test temperatures of 20 deg. F. will generally freeze with the formation of ice crystals after several hours. Many adhesives are freeze-thaw stable, but should not be subjected to repeated freezing cycles. Most products will recover from one or more cycles of freezing and thawing but some will be rendered un-useable after freezing once and are not considered freeze-thaw stable. In the event the adhesive has frozen, DO NOT MIX, but let the product sit undisturbed at room temperature until thawed. Upon thawing, if the product appearance is unchanged, it is most likely still useable. A quick bond test can be used to verify that the product still spreads and performs normally. Aerosol adhesives are generally rendered unusable after freezing.

At times an adhesive product may be subjected to freezing temperatures, most likely during the transportation of the product. Water-based flooring adhesives are intended for use with indoor applications, and may demonstrate adverse effects from being frozen and subsequent thawing. Shipments originating from XL Brands warehouse that are anticipated to be subjected to cold conditions will have a freeze indicator tab attached to the pallet. The pallet will be wrapped in a special foil bubble wrap that helps protect the material for short bursts of cold temps during transport. To greatly ensure delivery success, products must be shipped by a carrier that protects from freezing such that at each stage of the process the material is protected by covering, and the carrier must ensure constant movement of material during process.

If the customer is concerned whether or not to sign for material as received, just have them check the freeze indicator applied to the pallet to see if material has been subjected to extreme cold temps. If the indicator tab is okay and has not frozen, then the customer is safe to sign for and receive the adhesive shipment. If indicator shows that the material has been frozen, then the shipment should be refused. It will then come back automatically to XL.

PLEASE have customer check the freeze indicator on pallet before signing for the shipment!

Conversely, storing adhesives at the higher temperature ranges can cause adhesives to separate into phases, lose viscosity and become more vulnerable to spoilage.

References:

ASTM D7149-11 Standard Practice for Determining the Freeze Thaw Stability of Adhesives

ASTM D1337-10 Standard Practice for Determining Storage Life of Adhesives by Viscosity and Bond Strength
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