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# Contact Cement Selection and Field Testing

## Notes

- This document is intended as a guide to selecting and field testing contact cements to verify compatibility with Life Floor tile installations.
- Test and install all contact cements according to manufacturer's specifications.
- Always field test contact cements to ensure proper performance before installation.
- Read manufacturer's Technical Data Sheet, Safety Data Sheet and any other documents to ensure contact cement meets the required performance measures.
- Always mix cement thoroughly before application.

## *Performance Measures*

**Use these criteria when selecting potential contact cements.**

### **Cement Type**

Contact cements that have the potential to work are flammable and have a base of chemically stable rubber, synthetic rubber, or neoprene with solvent carriers. Any water based or non flammable contact cements will not perform to Life Floor required standards and will break down in an aquatic environment.

### **Flash Time**

Drying or flash times between 5 and 30 minutes are preferred. This allows for the preparation of multiple tiles simultaneously without slowing work flow.

### **Open Time**

This is the time from when the contact cement is flashed and ready to bond to when the contact cement will no longer bond strongly. Longer open times are generally preferred. High performing contact cements have open times of roughly 2-5 hours. This can be as little as 60 minutes.

### **Workability**

Cement must be thin enough that it can be spread on Life Floor with a paint roller or appropriate notched trowel but not so thin that multiple coats are required to have enough adhesive to bond properly. Cements that are too thick result in fewer tiles installed per gallon/liter. Cements that are too thick should not be diluted.

## Environmental Sensitivity

The contact cement must have a practical installation temperature window for the environment they are applied to. High performing cements can generally be applied in conditions ranging from 60°F to 120°F. The contact cement must also have resistance to heat after curing up to 150°F. Other environmental factors such as humidity may have to be tested on a case by case basis, and will require field testing at the installation location. Substrates should be thoroughly dried before attempting to install Life Floor. See the manufacturer's requirements for more details.

## Substrate pH

Most contact cements will perform well when the substrate pH lies in the neutral range. Check with the manufacturer for the specific acceptable pH range. Bonding to substrates outside of this range may break down the bond over time and cause failure.

## *Field Testing*

**Use these tests to determine whether a prospective contact cement is applicable to Life Floor installation. It has been found that a contact cement's documents indicate it would be a good adhesive but testing has revealed it to be unusable.**

### **Test 1: Tile to Tile Test**

Use contact cement as per manufacturer's instructions to bond two Life Floor samples back to back. As soon as the contact cement is flashed, bond the samples together. Once bonded, the contact cement should form an instant and strong bond, and should not be able to be repositioned once mated. This ensures that installed tiles will not shift once placed. Allow tiles to cure to manufacturer's specifications and recheck the bond. Tiles should not be able to be separated without damaging the Life Floor material.

### **Test 2: Submersion Test**

Bond a sample of Life Floor to a paver, brick or small piece of cement board. Immediately upon bonding submerge entire sample in pH neutral fresh water or chlorinated pool water. Allow the sample to remain submerged for 24 hours. Remove from water and check the bond as in Test 1. This test ensures that newly installed tiles will not fail due to rainfall or park reopening immediately after an installation is complete.

### **Test 3: Open Time Test**

Use contact cement as per manufacturer's instructions to bond two Life Floor samples back to back. When the contact cement is flashed, wait 60 minutes before bonding the samples together. This should be considered a minimum open time to allow for efficient installations. Once bonded, the contact cement should form an instant and strong bond, and should not be able to be repositioned once mated. Allow tiles to cure to manufacturer's specifications and recheck the bond. Tiles should not be able to be separated without damaging the Life Floor material. This test can be repeated with different open times (2-5 hours) to determine the approximate maximum open time.