



POLYUREA WHITE PAPER

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Inside this Booklet You will Learn...

FREE GUIDE: Polyurea vs. Epoxy Joint Fillers & Sealants

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Polyurea vs Epoxy Joint Fillers

There are many factors that should be looked at when selecting joint fillers / sealers for hard heavy wheeled traffic and interior slab applications. It is clear that Polyurea based systems have many performance characteristics that make them a far better solution than traditional epoxy joint fill systems.



Better Color Stability and Long Term Aesthetics

How well your joint fill material retains its color during its service life weighs heavily on the overall aesthetics for your flooring project. The VersaFlex SL Series polyurea joint fill systems have superior UV stability. They are more color stable over time and will retain color closer to original when compared to the other joint materials like epoxy joint fillers. Epoxies and hybrid polyureas have poor UV stability, and lower color stability when exposed to the UV spectrums many of the new lighting systems used today.

Moisture In-Sensitivity

Most epoxy joint sealant systems tend to be adversely affected by moisture, particularly in early installation on new construction projects where there can still be substantial moisture on the joint wall surfaces. Hybrid polyurea joint fillers are also moisture sensitive at dispensing time. Some will react with moisture in the joint and bubble or grow up out of the joint, like a cake rising. Versa Flex Joint Fillers are not sensitive to moisture as they are designed to be a high performance joint filler unlike other hybrid systems. Moisture in the joints can also compromise the adhesion of the joint filler to the concrete joint faces, resulting in early joint separation.

Image below shows comparison of leading competitor's joint fill material compared to VersaFlex material in a moisture laden joint.



Higher Elongation Performs When Joints Move

Many epoxy manufacturers claim their epoxy joint fillers can “move” somewhere in the 5% to 8% laterally (side to side) inside the joint. This is difficult to accept since epoxy is a high modulus material (hard and stiff / rigid) and has a very low elongation factor to allow movement with the concrete. A high performance polyurea like a Versa Flex SL-85 has >10% movement lateral (side to side) elongation while still being firm enough to protect the side walls during heavy traffic. The VersaFlex polyurea SL Joint Sealant systems are a low modulus material, but not all polyureas from other manufacturers are equal in quality.

Installation in Cold Conditions

Epoxy manufacturers do not recommend that epoxies be installed in ambient temperatures below 35°F (~2°C). Ambient temperature of 40°F (4.5°C) and rising is the typical recommendation for installation of these epoxy systems. Not all polyureas can be used in cold applications either. Hybrids may not cure in the cold conditions. VersaFlex high performance polyurea joint fillers are an excellent choice for cold and freezer applications and have excellent cured properties. VersaFlex joint fill materials are commonly used in freezers and cold storage applications.

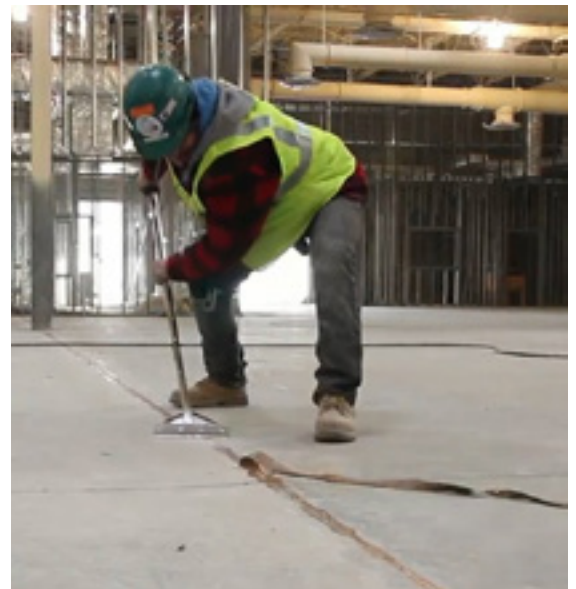


Superior Adhesion to Concrete

Epoxy manufacturers will say that the adhesion values are about the same. When they say that, they really mean, they are “adhered” to concrete like quality duct tape. In reality, polyurea based joint sealant systems will typically have greater adhesion values over epoxies, and high performance polyurea will have much better adhesion over hybrid polyureas.

Faster Shaving of the Joints Means Less Downtime

All joint material that is used as a filler has to be shaved to give a level transition for traffic from one slab to the other. Epoxies typically take 8 to 12 hours to cure. During this time no traffic will be allowed on the slab as the epoxy will track all over the concrete surface. VersaFlex polyurea joint fillers may be shaved within the one hour window which allows the slab to be returned back to service much sooner without tracking material.



Polyurea Will Not Stain*

Epoxies also leave a stain on the surface where overfill material sets. Stain preventative films need to be pre-applied to the joint surface edge prior to installing epoxies to prevent surface staining. This material must then be removed causing additional labor and cost. Many if not all of the hybrid polyurea joint fillers will stain the concrete as well.

*Versa Flex’s high performance polyurea joint filler will not stain the concrete if allowed to cure one hour prior to shaving. All polyureas may be shaved within the one hour window which allows the slab to be returned back to service much sooner without tracking material and jeopardizing the installation quality.

Why Choose VersaFlex

There are several differing levels of quality in polyurea joint fillers just as there are in the paint industry. The purer the polyurea, the higher the quality, and the better the life cycle and the overall performance will be. VersaFlex Incorporated is one of the original pioneers in the polyurea industry and is an ISO 9001: 2008, Global Certified Quality Manufacturer and Design Certified producer of it's own product.

We are “The Polyurea People®”

Please Contact Us For More Information and Product Samples:

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- ACI - American Concrete Institute
- CPAA - Concrete Polishing Association of America
- CSI - Construction Specifications Institute
- ICRI - International Concrete Repair Institute
- SSPC - Society for Specialty Protective Coating

