



Item# J45V Revised: 08/25/2010

**Vertical-grade 100% Polyurethane Joint Compound**

**Description**

Epoxytec Uroseal 45V™ polyurethane joint sealant is two component, aliphatic, chemically curing, 100% solid urethane sealant formulated as a high build coating / joint sealing system. Once cured, the material forms a high quality elastomeric sealant. Uroseal 45V™ is ideally suited for indoors or outdoors with use on concrete, wood, and most construction materials. Uroseal 45V™ produces a flexible, long-lasting sealant with extraordinary adhesion, cohesion, and elasticity that resists deterioration caused by weathering, stress, movement, water, oils, and many chemicals. Provides corrosion protection and chemical resistance; and because of its mixed gel-state, it is especially designed for use on vertical and overhead applications.

**Typical Uses**

Uroseal 45V™ is recommended for use in all horizontal expansion joints for roadways, airport runways & taxi ways, ring seals (ie: manhole chimney seals, pipe joints, etc – H<sub>2</sub>S resistance up to 800ppm), and industrial & commercial floor slabs. It serves well as an impermeable compound for sealing and as a joint sealant for secondary containment structures.

In addition, when used as a coating, the material offers a monolithically lining solution.

**Theoretical Coverage**

The following table indicates the number of linear feet filled by one gallon of Uroseal 45V™ for joints of various widths and depths:

Joint Depth	Joint Width						
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/4"	308	205	154	122	102	88	77
3/8"		136	102	82	68	58	51
1/2"			77	61	51	46	38
5/8"				49	41	37	30
3/4"					34	31	25
7/8"						25	22
1"							19

*Uroseal 45V™ is a 100% solid material that will not shrink.*

*Therefore, the theoretical coverage properties between wet film thickness (WFT) and dry film thickness (DFT) are the same. Eighty (80) square feet (sq.ft.) per gallon (gal.) at 20 mils thick. Actual coverage will depend on surface conditions, irregularities, and surface profile.*

**Surface Preparation**

The success of any coating application is directly proportional to the completeness of the substrate preparation and the care the application crew puts into the application. Surface must be clean and sound. Remove all dust, contaminants, grease, curing compounds, rust, impregnation, waxes, foreign particles, and disintegrated materials from the surface, in order to achieve a clean and profiled surface.

**Concrete:** Prepare the concrete by abrasive blasting, high pressure water cleaning, and/or approved mechanical method to achieve clean, sound, and profiled concrete. Prepare concrete in accordance with SSPC-SP 13/NACE No. 6. "Surface Preparation of Concrete." Please consult with Epoxytec for a recommended concrete primer.

**Steel:** Before preparing steel, please inspect and remove oil, grease, or other contaminants - "Solvent Cleaning" (SSPC-SP1) may be required. Remove all sharp peaks, including weld spatter. Abrasive blasting (or other approved mechanical methods) must be used in order to achieve a clean surface with a minimum profile of 3 mils. Please utilize an Epoxytec recommended primer.

**Wood:** Remove all grease, oil, dirt or other foreign matter by solvent or detergent washing. Prepare wood surface by abrasive sanding and washing (allow to dry and prime using an Epoxytec recommended primer).

**Application Method**

To a large extent, the design of the joint depends upon a variety of factors such as the maximum expansion and contraction of the surface materials due to thermal change. Where possible Uroseal 45V™ should be applied when the joint is at its median opening so as to obtain the greatest efficiency with subsequent joint movement. The dimension of the joint to be sealed must be established in relation to service conditions.

Uroseal 45V™ has been tested for bond durability at +/- 50% joint movement and exhibited no adhesive or cohesive failure. However, industry standards dictate that joint and width design should not exceed 25% movement. <cont'd>



The joint width may be determined by calculating the change in size of the joint between high and low temperature extremes and multiplying the change by a factor of four.

In deep joints, the sealant depth should be controlled by the use of joint-fillers or back-up materials. The back-up material must be compressible, such as a foam *Backer-Rod*. Where the depth of the joint does not permit use of the *Backer-Rod* materials, a bond breaker tape is recommended to prevent three-point bonding. To maintain recommended sealant depth, *Backer-Rod's* installed by compressing and rolling it into a joint channel without stretching lengthwise. *Backer-Rod* should be about 1/8" larger in diameter than the width of the joint to allow for compression. Uroseal 45V™ does not adhere to the *Backer-Rod*, and no separate bond breaker is required.

*Important: Never use fillers/joint bond breaker material impregnated with oils, asphalt, or tar.*

Uroseal 45V™ is supplied in a gel consistency. It can be worked by hand directly from the container, transferred to smaller containers, or applied by bulk caulking gun or pumped.

Priming: Consult with Epoxytec for recommended primer.

Mixing: Uroseal 45V™ is a two-component material that requires thorough mixing before the application. Proper mixing is achieved using a heavy duty, slow speed drill, and a mixing paddle such as a "Jiffy Mixer." Four minutes of mixing is adequate to ensure a homogeneous mix. Mix units in entirety.

Cleaning: Immediately remove all excess, uncured sealant adjacent to the joint with solvent.

## Thinning

Epoxytec does not advise thinning Uroseal 45V™

## Storage & Handling

- Shelf life: 6 months, sealed.
- Storage: Store in a dry area away from direct sunlight. The product should be conditioned to between 65° F and 90° F before use.

## Packaging & Color

- 2 ½ gallon kit (5 x ½ gal. tubs/box) Item# J45V-K1 (grey)

## Technical Properties

Hardness, Shore A ASTM C92	45
Artificial Weathering ASTM G23-89	No elastomeric property changes
Freeze / Thaw ASTM C666	300 cycles - no damage
Bond Durability ASTM C920-87	No failure after 25% extension
Tensile Strength of Rubbers & Thermoset Elastomers ASTM D412	240 psi
Ultimate Elongation ASTM D412	800%
Recovery TT-S-00227E	96%
Weight Loss TT-S-00227E	4.75%
Tear Resistance ASTM D624-86	44 lbs./in.
Staining ASTM C920-87	Passes
Service Temperature	-40F – 170F
Initial Cure (80F)	5 hours
Final Cure (80F)	48 hours

\* Safety: Consult Material Safety Data Sheet for all material safety information.



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