



PRODUCT TECHNICAL DATA SHEET

EPOXY FLEX

Advanced Coating Systems

FLEXIBLE TWO-COMPONENT CYCLOALIPHATIC URETHANE MODIFIED EPOXY

GENERAL PRODUCT DESCRIPTION

Epoxy Flex is a flexible, two-component, high performance, cycloaliphatic, 100% solids, urethane modified epoxy coating. Its epoxy chemistry provides excellent bonding characteristics with the additional advantages of flexibility.

Advantages:

- Flexible - Elongation (85%)
- Provides Resistance to Thermal Cycling
- Flexible Primer, Body Coat, or Top Coat
- High Color Stability for an Epoxy
- High Gloss
- 0 Voc - 100% Solids
- Withstands Medium Traffic as a Thin Mil
- Essentially Odorless
- No Amine Blush
- Chemical Resistant
- Can be Applied Over 10 Day Old Concrete
- Flexible Primer, Body Coat, or Top Coat

PRODUCT DATA

Volumetric Ratio:	2 to 1
Solids:	100%
Approximate Coverage:	100 Sq Ft per Gallon. at 16 Mils
Application Temperature:	65-90°F
Thinning:	Not Required
Pot Life:	15-20 Minutes
Working Time On Floor:	20-30 Minutes
Cure Time:	8-10 Hours (Walking) 24 Hours (Traffic)
Critical Recoat Time:	24 Hours
Shelf Life:	12 Months
Usda Food And Beverage:	Meets Requirements

Cure time, pot life, and working time are based on a slab temperature of 70-75 F°, and will change accordingly as temperature change.

PACKAGING

Epoxy Flex is available in 2 different kit sizes:

	Part A	Part B
3 Gallon Kit	2 gal.	1 gal.
15 Gallon Kit	10 gal.	5 gal.

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Tensile Strength	1,550 psi	ASTM D 638
Bond to Concrete	350 psi concrete fails at this point	ASTM D 4541
Coefficient of Friction	0.6 minimum	ASTM D 2047
Flammability	Self-extinguishing	ASTM D 635
Hardness, Shore D	55	ASTM D 2240
Flash Point	>200°F	ASTM D 93
Porosity	00	NACE Stand

APPLICATIONS

Epoxy Flex's unique chemistry allows it to be used in the following applications:

- Self-priming
- Plywood substrates
- Decking
- Crack control
- Mezzanines

COLORS

Refer to the ONYX Epoxy Solid Color Chart for standard color selection. Other colors are available at an additional charge.

CONCRETE PREPARATION

Before the coating is applied, the concrete must be:

- Clean – Contaminants removed
- Profiled – Surface mechanically prepared
- Sound – Cracks repaired

Mechanical methods are required for preparing concrete prior to coating application. Shotblasting and diamond grinding are acceptable methods. The concrete profile should be approximately a CSP 3 - CSP 5 depending on the particular application and the condition of the concrete.

PATCHING

Voids, cracks, and imperfections will be seen in the finished coating if the concrete is not patched correctly. Epoxy Flex can be used as a patching material by mixing Konasil into the mix.

MIXING

The mix ratio of Epoxy Flex is 2 to 1. That is, 2 parts of A (resin), to 1 part of B (hardener). Generally, 3 mixed gallons of Epoxy Flex is ideal for application. Mix the following with a drill and jiffler mixer.

1. Premix the Part A for 45-60 seconds until uniform. Then, if using the 15 gallon kit, pour out 2 gallons into an empty mixing bucket. (The 3 gallon kit allows the Part A bucket to be used as the mixing bucket, since the Part A comes in a three-and-a-half gallon bucket.)
2. Add 1 gallon of Part B and mix for another 2 minutes.
3. Immediately pour onto the floor in a ribbon. Epoxy Flex in mass has a short pot life. Once poured out onto the floor, 20-30 minutes of working time can generally be expected.

APPLICATION PROCESS

For a nominal 16 mil coating system, apply Epoxy Flex in 2 coat. Apply the primer at 350-400 Sq Ft per gallon. Apply the top coat at 100 Sq Ft per gallon.

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally mornings), the air expands and can cause out gassing in the coating. It is safer to apply coatings in the late afternoon, especially for exterior applications. Optimum ambient temperature should be between 65-90°F during application.
2. Following mixing instructions (see above).
3. Immediately following mixing, pour the product onto the surface in a ribbon, while walking and pouring at the same time until the bucket is empty.
4. Using a window squeegee on a pole, pull Epoxy Flex over the substrate. As a first coat over bare concrete, pull resin as thin as possible while still wetting out concrete and uniformly covering surface. This allows trapped air to escape more easily.
5. Use a 3/8", non-shedding nap paint roller with phenolic (plastic) core paint roller to roll the coating forwards and backwards.
6. Lastly, backroll in the opposite direction from step 5.
7. To reinforce the Epoxy Flex, apply at 48 mils (33 Sq Ft per gallon) while embedding a fiberglass scrimcloth into the resin. Make sure the resin completely covers the fiberglass.

PRODUCT LIMITATION

Always read ONYX PRODUCT LIMITATION GUIDELINES document prior to installation as the content below is only partial information.

Ground level concrete slabs emit moisture vapor. The allowable vapor emissions for concrete is 3 lbs. per 1,000 Sq Ft over a 24 hour period. If vapor is above this level, then blistering and delamination of the coating may occur. A calcium chloride test, in accordance with ASTM F1869 Standards, should be performed to determine the concrete vapor level. If the vapor levels exceed the 3 lb. limit, a concrete vapor control system should be used before applying any coating system. Please contact the ONYX technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to the coating application. As a general rule, control joints (saw cuts) and random cracks should be saw cut or chased first, then filled with the appropriate patch material. Construction joints (2 slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints.

If applying Epoxy Flex on either a wood or second floor substrate, the joints will be extra susceptible to cracking. Perform a mockup sample prior to the coating application to determine if the coating will be able to handle the movement since every substrate (and its environment) is different. Treat the joints accordingly. Extra Flex is not intended to be used as a full waterproofing system.

CLEANUP

Epoxy Flex, while in an unreacted state, may be cleaned up with water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a stronger solvent may be required if the resin is nearly set up.

WARRANTY

ONYX products are warranted for 1 year after date of manufacture. Please refer to the ONYX Limited Material Warranty for additional clarification. Refer to the ONYX General Product Limitation Guidelines.

SAFETY

Consult Epoxy Flex safety data sheet. Avoid Epoxy Flex contact with eyes and skin. Some individuals may be allergic to epoxy. Always wear protective eyewear, clothing, and gloves. Safety always comes first.

MAINTENANCE

Refer to the ONYX Maintenance and Cleaning Guidelines.