ONYX CONCRETE COATINGS

PRODUCT TECHNICAL DATA SHEET

EPOXY HIGH CLEAR

Advanced Coating Systems

TWO-COMPONENT CYCLOALIPHATIC CLEAR EPOXY

GENERAL PRODUCT DESCRIPTION

Epoxy High Clear is a two-component, high performance cycloaliphatic, 100% solids clear epoxy. It provides a durable, high gloss finish which beautifies concrete for years. Its epoxy chemistry provides excellent bonding characteristics and its low viscosity allows deep penetrating into a concrete substrate. Epoxy High Clear is used in the decorative Quartz System (for both the broadcast and top coat), Chip System (top coat), and Metallics (mixed with pigment). Epoxy High Clear can also be used as both a clear epoxy primer and sealer, whether going directly to concrete or over an existing coat. Epoxy High Clear has approximately an 8 hour cure time. When a fast turnaround time is required, use the Epoxy High Clear Fast which has a 4 hour cure time. It is always recommended to apply a polyurethane finish, such as the 2K WB CRU, to provide additional resistance to UV that commonly discolors clear epoxies.

ADVANTAGES

- Essentially Odorless
- Self-Priming
- Voc = 0, 100% Solids
- High Gloss
- Withstands Heavy Traffic with Appropriate Thickness
- Chemical Resistant
- Good Light Stability for a Clear Epoxy
- No Amine Blush
- Can be Applied Over 10 Day Old Concrete
- Rapid Cure

PRODUCT DATA

Volumetric Ratio:	2 to 1
Solids:	100%
Approximate Coverage:	100 Sq Ft @ 16 Mils
Application Temperature:	65-90°F and 5° Above the Dew Point
Thinning:	Not Required
Pot Life:	15-20 Minutes
Working Time On Floor:	20-30 Minutes
Cure Time:	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 changes.

COLORS

Epoxy High Clear is available in clear only. If installing Epoxy High Clear direct to old, damaged concrete, a mockup sample is recommended to manage aesthetic expectations.

APPLICATIONS

- Pharmaceutical
- Clean Rooms
- Laboratories
- Aerospace
- Aviation / Hangars
- Automotive / Service Bays
- Animal Care
- Schools / Universities
- Hospitals
- Cafeterias / Break Rooms
- Aisle Ways
- Retail / Showrooms
- Lobbies
- Restrooms
- Residential Garages

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Compressive Strength	8,880 psi	ASTM C 579
Flexural Strength	8,100 psi	ASTM D 790
Tensile Strength	5,700 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
Taber Abrasion	37 mgs	ASTM D 4060 CS 17 Wheels
Flammability	Self-extinguishing	ASTM D 635
Hardness, Shore D	82	ASTM D 2240
Flash Point	>200°F	ASTM D 93

SURFACE 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. Shot-blasting, diamond grinding, scarifying, and scabbling are all acceptable methods. The concrete profile should be between a CSP 3 - CSP 4.

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PATCHING

Voids, cracks, and imperfections will be seen in finished coating if the concrete is not patched correctly. If going direct to concrete, use the Epoxy High Clear as the patching product by simply adding silica sand and/or clean dust leftover from the grinding. If using for a decorative system, use the appropriate ONYX patch material for project requirements.

MIXING

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

1. 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 2 minutes.
3. Immediately apply to the floor. Epoxy High Clear in mass has a short pot life. Once poured out on the floor, 15-20 minutes of working time can generally be expected.

APPLICATION PROCESS

Epoxy High Clear is a multi-purpose product, used to broadcast and seal the Quartz System, seal the Chip System, and to apply Metallic pigment. It is also used to prime/seal direct to concrete or other coating systems. Refer to the ONYX Systems Catalogue for further clarification about the particular application:

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. Mix 3 gallons of resin using above mixing instructions.
3. Apply at the appropriate coverage rate (per system) by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty.
4. Using a notched squeegee on a pole, pull High Clear Epoxy over substrate to spread out evenly with the coverage rate of desired system.
5 Using a 3/8", non-shedding phenolic (plastic) core paint roller, roll the coating forwards and backwards.
6. Lastly, backroll in the opposite direction from step 5.

PRODUCT LIMITATION

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

Epoxy High Clear should not be installed more than 20 mils (80 Sq Ft gal) in a single pass to resist discoloration. Apply multiple coats to achieve a thicker floor. Even though Epoxy High Clear has UV stability for an epoxy, a polyurethane finish, such as the 2K WB CRU, will help resist against long term discoloration that happens to all epoxies.

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.

CLEANUP

Epoxy High Clear while in a liquid state may be cleaned up with water and degreaser. Otherwise a strong solvent may be required while Epoxy High Clear is setting up.

WARRANTY

ONYX Concrete Coatings products are warranted for 1 year after date of manufacture. Please refer to the ONYX Concrete Coatings Limited Material Warranty for additional clarification.

SAFETY

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

MAINTENANCE

Refer to the ONYX Maintenance and Cleaning Guidelines.