ACE EPOXY

ACE FLAKE SYSTEM.

Technical Data Sheet (TDS)
February 2021

DESCRIPTION.

ACE FLAKE SYSTEM is a multi-layer decorative floor coating system consisting of pigmented epoxy primer broadcast with decorative flake and sealed with a polyaspartic topcoat. The topcoat provides a clear high gloss surface for excellent abrasion, chemical resistance, and UV stability. ACE EPOXY primers withstand moisture vapor emissions up to 5 lbs. / 1,000 sq. ft / 24 hrs. per ASTM F1869 for industry leading adhesion to concrete.

With ACE EPOXY, product configuration/installation can be designed to be finalized in one or two days and accommodate for climate variables.

APPLICATIONS.

ACE FLAKE SYSTEM is an easy-to-install decorative epoxy/aspartic flooring system with high performance characteristics making it an ideal application for:

- Residential Garages
- Locker Rooms / Restrooms / Breakrooms
- Schools
- Office Lobbies / Waiting Rooms
- Retail Spaces
- Cafeterias
- Hospital and Healthcare Environments.
- Showrooms
- Veterinary Facilities
- Commercial and Industrial
- And many more…

For previously coated surfaces, please consult ACE EPOXY Technical Support for advice.

ADVANTAGES.

- UV stable topcoat.
- Flake texture provides added slip resistance.
- Superior adhesion to concrete.
- Interior and exterior applications.
- A variety of flake color blends.
- Fast cure times.
- One-day applications achievable with accelerators.
- Low odor application.
- Moisture Vapor Barrier up to 5 lbs. MVE.

PHYSICAL PROPERTIES.

Volatile Organic Compound		<50 g/L
Compressive Strength	ASTM D 695	8,700 psi
Tensile Strength	ASTM C638	4,800 psi
Surface hardness Shore D	ASTM D2240	80
Adhesion	ACI 503R	350 psi / 100% Concrete Failure
Flexural Strength	ASTM D790	9,800 psi
Flammability	Self-extinguishing over concrete	
Elongation	ASTM D 638	5.4%
Abrasion Resistance	ASTM D4060	46.8 mg lost

CHEMICAL RESISTANCE.

CHEMICAL.	EFFECT.
Acetone	No Effect
Xylene	No Effect
10%HCL	No Effect
Ammonia	No Effect
Degreaser (d-limonene & Pine Sol)	No Effect
Liquid Plummer	No Effect
Vinegar	No Effect
Clorox	No Effect
Windex	No Effect
Motor Oil	No Effect
Gasoline	No Effect
Skydrol	No Effect
Hot Tire	No Effect

COVERAGE.

PRODUCT.	FIRST COAT.
202 ACE EPOXY 204 ACE EPOXY	150-250 sq. ft per gal 150-250 sq. ft per gal
600 ACE FLAKE	1 lb. per sq. ft
302 ACE POLYASPARTIC 303 ACE POLYASPARTIC 304 ACE POLYASPARTIC	150-175 sq. ft per gal 150-175 sq. ft per gal 150-175 sq. ft per gal

PACKAGING.

Epoxies, polyaspartics, and urethanes can be purchase in one- or five-gallon kits.

Storage: All containers should be stored at 50° F to 90° F and be kept tightly sealed and out of direct sunlight.

ENVIROMENTAL CONSIDERATIONS.

Ideal environmental conditions for ACE FLAKE SYSTEM are between 50-85°F and relative humidity of 65%.

- Hot and humid climate will shorten the pot life and curing time, which can have an adverse effect on the final appearance of the floor.
- Cold and dry climate will increase the pot life and prolong the curing time, making the floor susceptible for contamination and longer shutdown times.
- Applying the product during descending temperature will help reduce concrete out-gassing from occurring.

Storing the material before the application in areas where the temperature is within the recommended range for at least a day is strongly recommended. Other methods accommodate for temperature and moisture outside the range:

- Ice the buckets several hours before the application in case of hot and humid weather. Use pail warmer in case of cold weather.
- Applying the material during the night, morning or afternoon will improve application conditions for hot weather. Applying during the day will help with colder conditions. Consult with ACE EPOXY Technical Support.

TECHNICAL SUPPORT.

www.aceepoxy.com/techsupport

Scan for system support and videos

SUBSTRATE CONDITIONS.

All concrete should clean, bare, and free of any curing membranes, such as densifiers, paints, or other sealers inhibiting the adhesion directly to the concrete substrate. Concrete shall be in structurally sound and stable condition. Concrete shall be free of dust, dirt, grease, contamination, surface laitance, and other potential bond-breaking substances that could impair adhesion. All cracks, gouges, and other surface defects shall be repaired appropriately prior to System installation, see ACE EPOXY options for cracks and joint fillers and repairs.

Moisture reading on concrete should not exceed 5 lbs. / 1000 sq. ft / 24 hrs. per ASTM F1869 for 204 ACE EPOXY and 5 lbs. / 1000 sq. ft / 24 hrs. per ASTM F1869 for 202 ACE EPOXY. Consult with ACE EPOXY Technical Support if moisture vapor transmission readings are above the recommended levels.

SURFACE PREPARATION.

Pour water onto the concrete surface. Inspect area to see if water penetrates concrete (concrete will darken). If water beads up during the penetration test, then the following additional preparation will be needed.

Nonporous concrete must be mechanically prepared to a profile of CSP (Concrete Surface Profile) between 2 and 4 per ICRI (icri.org). The method used to mechanically achieve the recommended CSP can range from grinding, shotblasting, sanding, light scarification, or any method recommended by ICRI. Non-acid biodegradable etchers might also be used. Consult with ACE EPOXY Technical Support.

RECOMMENDED APPLICATION TOOLS.

- 18" x 3/8" Lint free Rollers
- 18" roller assembly
- Epoxy / Paint Mixer
- Spike Shoes
- Bent Floor 24" Scraper + Handle
- Rigid 18" Floor Scraper + Handle
- 4-Inch Weenie Roller Frame
- 4-Inch Weenie Roller 3/8 Nap 2 Pack
- 6-Inch Weenie Roller Frame
- 6-Inch Weenie Roller 3/8 Nap 2 Pack
- 22" Magic Trowel
- Acetone or Xylene for cleaning
- Rags
- Gloves, Long Pants & Long Sleeves
- Eye Protection
- Respirator compliant with NIOSH / Face mask

MIXING 202 ACE EPOXY.

1. Premix Part A and Part B prior to mixing both components with a low-speed drill using a jiffy type mixer.
2. Add color pack to Part A and mix.
3. Add Part B to colored Part A and mix for 2-3 minutes.
4. Scrape sides of the bucket to assure all material is mixed, continue drilling for one minute.
5. Optional: add accelerators (consider environmental conditions, pot life will be reduced).

EPOXY APPLICATION.

1. Apply enough product on the floor to work edges with 3"-4" brush or 6" weenie roller. Work fast enough to keep wet edge.
2. Pour a line of 202 ACE EPOXY or 204 ACE EPOXY on the floor; begin rolling with 3/8" nap 18" roller. Target between 6-10 mills (150-250 sq. ft/gal). Wear spike shoes as needed.
3. For even coverage and better flake adhesion back roll the 202 ACE EPOXY.

FLAKE APPLICATION.

1. For the application of flake to be completed, broadcast the flake to rejection—until the entire wet epoxy has been covered and is no longer visible.
2. When the 202 ACE EPOXY is dry enough for foot traffic the excess flake needs to be recovered through different methods—vacuuming, sweeping or blowing. Flakes might be reused.
3. Scrape the floor thoroughly with a rigid scraper to remove all rough edges and remove any additional flake pieces. Use a vacuum to remove the additional flake residue.

TOPCOAT APPLICATION.

1. Premix Part A and Part B within their respective buckets.
2. Pour Part B into Part A and mix for 3 minutes using a jiffy blade mix with a low-speed drill.
3. Make sure that all areas of the material in the container are mixed. Scrape the walls of the bucket with a wooden paddle to ensure all material is mixed. Continue mixing for one minute.
4. Use spike shoes when applying polyaspartic for proper reach of the application areas.
5. Pour the material in even lines about 4" to 6" thick.
6. Using an 18" x 3/8" nap roller spread the polyaspartic topcoat to achieve a rate of 150 - 175 sq. ft per gallon.
7. Assure there is an edge of uncured material between applications of material for uniformity and proper curing.
8. Allow the topcoat to cure proper time according to climate conditions before opening to traffic. Please refer to product TDS for curing times.

LIMITATIONS.

- Must be top coated with a UV Resistant Sealer to stop ambering.
- Will not bridge cracking.
- All sources of ignition should be turned off during installation and remain off until solvent vapors have dissipated.

Slip Resistance OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. ACE EPOXY recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets

current safety standards. ACE EPOXY will not be responsible for injury incurred in a slip and fall accident.

ACE EPOXY guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ACE EPOXY (herein referred to as "seller") makes no warranty, expressed or implied, regarding the use of its products. Since use of this product is beyond the seller's control, the buyer assumes all risk of use. Sellers obligation shall be to replace material if found defective. Seller shall not be liable for any damage, injury, loss, direct or consequential, resulting from the use of its products. End user must determine if substrate is suitable for coating application before installing.