



RAPID REPAIR EPOXY

PRODUCT DESCRIPTION AND USE

Rapid Repair Epoxy is a specially formulated resin system designed for patching damaged, cracked or spalled concrete prior to the application of coatings or flooring overlays. Its chief advantage over conventional epoxies is its very rapid cure rate and low temperature cure capabilities (down to 35°F). This allows the contractor to complete his repair work and continue with his application in as little as 60-90 minutes at room temperature.

Rapid Repair Epoxy is formulated with low viscosity to allow for the use of 1-2 parts silica sand to 1 part mixed resin. The sand filler improves the economics and extends the work time.

Chemical Composition

Multi-functional Bisphenol F epoxy crosslinked with accelerated aliphatic amines.

Colors

Available in clear only.

Limitations

- Must be mixed with silica sand to extend work time.
- Product is subject to amine blush when cured at cooler temperatures and higher humidity. Blush must be removed by sanding, grinding or solvent wiping prior to overcoating to avoid possible intercoat adhesion failure
- Use protective gloves and a cartridge type respirator when working with this product.

TECHNICAL DATA

Physical and Performance Properties

Solids Content, %	100%
Mixing Ratio, by Volume	2-1
Viscosity, cps unfilled material, 77°F	350
Hardness, standard material (Shore D, ASTM D-2240)	80
Hardness, control joint filler (Shore D, ASTM D-2240)	68
Adhesion to damp or dry concrete (ASTM D-4541)	450 psi, concrete fails before loss of bond.
Pot Life (77°F, 1 quart mass, blended with equal parts 30 mesh silica sand)	7 minutes
Pot Life (50°F, 1 quart mass, blended with equal parts 30 mesh silica sand)	35 minutes
Pot Life is reduced by increasing temperature and/or mass	

WARRANTY INFORMATION

Arizona Polymer Flooring 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. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.

HIGH PERFORMANCE CONCRETE COATING SYSTEM

Physical and Performance Properties (Cont'd.)

Cure Time (ready to grind or sand, 77°F)..... 90 minutes

Cure Time (ready to grind or sand, 50°F)..... 3 hours

Cure times are influenced by several factors:

- 1) Temperature of both the air and the substrate
- 2) Thickness of the application – thicker applications will cure more rapidly than thinner applications
- 3) Mesh size of the sand used in the resin-sand mixture – smaller mesh sizes have more surface area and absorb more resin. This slows the reaction and also drives up the mixture viscosity. 60 mesh sand will extend work time better than 30 mesh, but flow of the mixture will be reduced.
- 4) The amount of the sand used in the mixture – a 1 part resin to 1 part sand mixture will cure somewhat faster than a 1 part resin to 2 parts sand mixture. This is because the sand absorbs some of the exothermic heat generated by the epoxy reaction.

GENERAL INFORMATION

Moisture Vapor Emissions Precautions

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride and relative humidity probe testing to determine if excessive levels of vapor emissions are present before applying any coatings. APF can supply moisture remediation products. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

Surface Preparation

Concrete must clean, sound and have a minimum 10 mil profile. Surface may be damp, but free of visible water. Profiling may be done by shotblasting, diamond grinding or acid etching. **If surface has been diamond ground, all grinding dust must be removed by thorough vacuuming or pressure washing. If acid etched, machine scrubbing with a nylogrit brush is required.** Adhere strictly to the guidelines published in the Arizona Polymer Flooring product catalogue. If concrete is cured less than 30 days, prime with APF VaporSolve™ Primer. Allow to cure 5-6 hours and apply Rapid Repair Epoxy.

Mixing Instructions

Because of the short work time of Rapid Repair Epoxy, it is important to follow the mixing and application instructions carefully. The mixing ratio of the material is 2 parts A to 1 part B. Adding 1-2 parts sand to 1 part mixed resin is recommended to slow the epoxy reaction and extend the work time. Product use economies are also improved when sand filler is used. Use 20 or 30 mesh sand. If using 2 parts sand to 1 part resin, 20 mesh is preferred because it will not drive up viscosity as much as 30 mesh.

Do not mix large batches. Start with 3 quart or 1 ½ gallon batches until you get the feel for work time. Proportion the resin and put into a 5 gallon pail. A small batch could be 2 quarts of A and 1 quart of B. **Do not mix until the sand portion has been added (3 quarts to 6 quarts of sand).** When both the resin and the aggregate are in the pail, mix well for 30 seconds, moving the mixer around the bottom of the pail. It is important to use a mixer with enough power to move and homogenize the resin/sand mixture. If using 2 parts sand to one part resin, mix for 1 minute. Mixing for longer than the recommended times will shorten the work time.

The joint filler version of the material does not require the addition of silica sand. All of the necessary fillers have been incorporated at the factory. If not mixing complete kits, premix both the Part A and the Part B before blending the components together. After premixing, proportion the material 2 parts A to 1 part B. Blend either 3 quarts or 1 ½ gallons in a 5 gallon pail and mix well with a drill mixer for 30 seconds.

Application Recommendations

Rapid Repair Epoxy uses a special amine hardener to obtain its fast set capabilities. The hardener can blush when cured under cool or higher humidity conditions. Since both temperature and humidity can cause this effect, it can be somewhat hard to predict its occurrence. The blush creates a down gloss and a slightly greasy feeling surface. If blushing has occurred, it must be removed by grinding or sanding before application of the next layer of material. **If this is not done, intercoat adhesion will be compromised.** If you are not sure whether or not the repair material has blushed, be safe and grind or sand before continuing.

After mixing the product, pour out of the pail immediately. Place with a flat steel trowel. Wiping the trowel with a medium evaporating solvent such as Xylene will aid in smoothing the surface. If using the control joint filler, fill the joint as full as possible. If a smooth joint is required, apply a second application slightly above level, allow to cure and grind smooth. Rapid Repair Epoxy cures for grinding is 90 minutes at 77°F. Cooler air or substrate temperature will extend the cure time.

Handling Precautions

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.