



TECHNICAL DATA SHEET

Royal Metallic

PRODUCT DESCRIPTION

Royal Metallic is a two component is a two component, high performance modified cycloaliphatic epoxy concrete floor coating system. Its epoxy chemistry provides excellent bonding characteristics. Typically applied at a 24 mil thick single coat (50 - 60 SF/gal). This dynamic blend does not require activator to be sprayed on the surface to obtain a unique and highly decorative look. It has 45 - 60 minutes working time and it has excellent flowability and self-leveling characteristics.

AVAILABLE COLORS

• Pearl	• Chestnut	• Pink
• Silver	• Violet	• Bright White
• Titanium	• Purple	• Rum
• Gun Metal	• Forrest Green	• Shimmer Gold
• Cambridge Blue	• Green Apple	• Earth Gray
• Ocean Blue	• Magic Yellow	• Sand
• Brass	• Orange Gold	• Sky Blue
• Copper	• Wine Red	• Orange Red

APPLICATIONS

The uniqueness and universality of Royal Epoxy chemistry facilitates the applications where USDA Food & Beverage and other regulatory requirements must be obtained. Areas of use include: Garage floors, Showrooms, Hotel Lobbies & Entryways, Exhibition halls, Restaurants, Retail/Commercial Venues.

PRODUCT DATA

Volumetric Ratio	2 to 1
Solids	100% (+/- 1%)
Coverage	50 sqft/gal. at 24 mil
	75 sqft/gal. at 20 mil
Application Temperature	55°-90°F
Thinning	Not Required
Pot Life	3 min.
Working Time on Floor	45-60 min.
Cure Time	24 hrs
Full Cure	5-7 days
Critical Re-Coat Time	NONE must screen
Shelf Life	12 months
USDA Food & Beverage	Meets Req.

APPLICATIONS

- Essentially odorless
- create dynamic, exotic look
- Longer working time
- ZERO VOC
- High gloss, & color stability
- Low Viscosity
- Chemically resistant
- No amine blush
- Modified to be helpful with UV resistance

PROPERTY

- Compressive Strength
- Flexural Strength
- Tensile Strength
- Bond to Concrete
- Taber Abrasion
- Flammability
- Hardness, Shore D
- Flash Point

VALUE

- 10,800 psi
- 11,700 psi
- 8900 psi
- 350 psi
- 75-80 Mgs
- Self-extinguishing
- 84
- >200°F

REFERENCE

- ASTM C 695
- ASTM D 790
- ASTM D 638
- ASTM D 4541 (Concrete fails at this point)
- ASTM D 4060
- ASTM D 2240



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CONCRETE PREPARATION

Before coating is applied, concrete must be:

- Dry – No wet areas
- Clean – Contaminants removed
- Profiled – Surface must be diamond ground to a CSP (Concrete Surface Profile) rating of "2" ... Roughly the feel of 100 Grit Sandpaper.
- Sound – All cracks and spalled areas repaired

Note: Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying and scab-bling are all acceptable methods.

REPAIR CRACKS

Voids, cracks and imperfections will be seen in finished coating if the concrete is not patched correctly. Joint Filler (Crack Repair) and/or Rapid Mender to fill cracks and imperfections. After the materials are cured, diamond grind patch. If another patching material is used, contact a Royal Epoxy technician for a compatible and approved alternative.

TESTING

All surfaces are not the same. It is recommended that a sample area be done before the start of the project. The test should be done on-site, using the proposed method by the assigned applicator to insure proper adhesion and color. A sample area should also be done on any existing coatings to determine if any contaminants exist or if delaminating will occur.

APPLICATION INSTRUCTIONS

Application of Royal Metallic for a nominal 20 to 25 mil coating system is applied in a single coat.

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally afternoon) 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.
2. Optimum ambient temperature should be between 55-90°F during application.

Note: Cure times are affected by ambient and slab temperatures. Temperatures of 55°F and lower can slow cure times. Temperatures of 85°F and higher will speed up working and times.

3. Apply at approximately 50-60 SF/gal by immediately pouring out blended material in a wavy ribbon while walking and pouring at the same time until a bucket is empty. *DO NOT LEAVE A BUCKET UPSIDE ON FLOOR TO DRAIN** or scrape sides.
4. Using a squeegee on a pole, pull Royal Metallic at a uniform thickness over areas to be coated.
5. At this point a number of techniques can be used to create a decorative finish. For more contact technical support 714-447-8700
6. As soon as your decorative finish technique is done walk off the floor. Do not overwork the epoxy or you get a muddled look.

PACKAGING

3 GALLON KITS

PART A	2 GAL
PART B	1 GAL

1.5 GALLON KITS

PART A	1 GAL
PART B	0.5 GAL

METALLIC POWDER 32 OZ BY VOL
METALLIC POWDER 16 OZ BY VOL



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CLEAN UP

Royal Metallic, while in an un-reacted state, may be cleaned up with hot water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a strong solvent like methylene chloride may be required if resin is nearly set up.

MIXING

The ratio of Royal Metallic is 2 to 1. That is, two parts A (resin) to one part B (hardener). Mix the following with a drill and mixing paddle. Note: If using a drill mixer, use a low speed (not to exceed 300 rpm) to prevent air entrapment.

SPECIAL NOTE

ALL Epoxy's manufactured by Royal Epoxy are NOT UV stable and can and WILL amber and discolor when exposed to UV light.

1. Premix (1)32 oz Metallic Powder Container into the 2gal of "A" Resin Container for 3 to 5 minutes. Allow to stand for minimum of 5 - 10 minutes to allow any air mixed in to escape.

2. Add 1 gallon of Part "B" Hardener and mix for another 60-90 seconds.

3. Royal Metallic is designed to be immediately poured on the floor. Leaving mixed product in the container will greatly reduce pot life. Once poured out on the floor, 45-60 minutes of working time can generally be expected.

WARNING! SLIP AND FALL PRECAUTIONS

OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slipresistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Royal 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. Royal Epoxy will not be responsible for injury incurred in a slip and fall accident.

Handling Precautions

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective gloves and clothing are recommended.

WARRANTY

Royal Epoxy products are warranted for one year after date of purchase. Please refer to the Limited Material warranty for additional clarification.

