



# Raven 155 Primer Technical Bulletin

## MANUFACTURER

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## DESCRIPTION

Raven 155 is a water borne epoxy primer that can be utilized to penetrate and seal concrete substrates. The unique formulation allows the primer to create a breathable membrane that has the ability to penetrate deep into substrates which may be exhibiting high volumes of moisture vapor emissions, such as green concrete. In situations where new concrete is to be top coated it is recommended that Raven 155 be used to both treat the prepared substrate. Raven 155 will not only help reduce moisture vapor emissions, but will also improve adhesion and reduce the occurrence of pinholes in the topcoat. Substrates treated with Raven 155 may also be primed with Raven 171 or 171FS 100% solids epoxy primer for maximum pinhole reduction.

Raven 155 epoxy is a two part epoxy that is mixed with water. The Raven 155 epoxy consists of a Part A resin and a specialty curing agent Part B. The two components are blended together and then mixed with potable water per the specified mix ratio.

*Note: While Raven Lining Systems has found these materials and methods to be successful in treating concrete substrates with high moisture vapor emission and pinholing issues, there are many variables which may cause adhesion problems and/or induce pinholes in coatings applied to concrete substrates. Standard good coating practices should be observed to reduce the effect of substrate temperature and moisture content/transmission when possible. Proper proportioning, mixing, application and curing is also vital in all material applications. Consult with Raven Lining Systems technical personnel.*

## RAVEN 155 PRIMER APPLICATION

For use as a concrete or masonry primer, the recommended WFT of Raven 155 to be applied will vary depending upon the porosity of the substrate but coverage can be estimated 200 square feet per gallon. A minimum of two successive applications at this coverage rate is recommended to fully saturate the substrate. Additional coats may be required for very porous substrates.

### MIXING RATIO (A:B:Water):

1:1:2 by volume Example: 1 gallon of Part A + 1 gallon of Part B + 2 gallons of water  
Water content may be lowered to reduce cure time or for application to wet or sweating substrates.

### COVERAGE:

Minimum Recommended WFT of 8 mils: 200 Square Feet/Gallon. Typical 10' x 4' manhole requires approximately a 1/2 gallon mix (including mix water).

### MIXING:

Add (1) unit of Part A into (1) unit of Part B and mix thoroughly for one minute using a power mixer and suitable mixing blade such as a Hanson mixer. Add (2) units of potable water and mix thoroughly. It is recommended to maintain coating material and water temperature below 75F to maximize working time. In high heat conditions, utilize storage in ice chilled cooler and use chilled water for mixing. Clean up of Raven 155 can be performed using warm, soapy water. Cleaning Part A alone will require a solvent such as acetone or MEK.

### POT LIFE FOR 1/2 GALLON MIX:

Material temp of 75F: 45-50 minutes  
Material temp of 90F: 10-15 minutes

## Raven 155 Primer

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### **APPLICATION:**

Raven 155 is recommended to be sprayed (or hand applied for small areas) to dry concrete/cement until the substrate is saturated (it is recommended to work the primer into the surface using a natural bristle masonry brush or roller). Hand application should be made using a natural bristle masonry brush or medium nap roller. Spray applications should be made using an airless sprayer (.015-.019" tip), conventional spray gun or a pump-up Hudson type sprayer followed by working into the surface with a saturated brush or roller. Drips, runs and pooled primer should be removed with clean rags or sponge to promote thorough curing.

### **Typical cure time at 72 F with less than 90% relative humidity:**

Tack free in 1 hour; dry to touch in 3-4 hours. Raven 155 should be allowed to cure to a "set-to-touch" state (no transfer to finger when touched) prior to applying additional Raven 155. Curing to a tack free state (primer can be touched and is not tacky) is recommended prior to applying other primers or topcoat. Cure time is dependent upon temperature, relative humidity and air movement. High temperature and low humidity will decrease cure time. Low temperature or high humidity will increase cure time.

It is also strongly recommended to fill all surface voids and honeycombs with a cementitious product or a polymer modified cement prior to the primer application and top coating to reduce the occurrence of outgassing pinholes.

### **RAVEN 155 KITS**

Standard kit sizes are:

Quart Kit: consists of (1) pint of Part A and (1) pint of Part B

Two Gallon Kit: (1) gallon of Part A and (1) gallon of Part B

### **TOP COATING RAVEN 155 PRIMER**

Raven 155 primer may be used in combination with a 100% solids epoxy primer such as Raven 171 or 171FS to maximize outgassing pinhole reduction. Following proper cure of Raven 155, Raven 171 primers may be applied and should be allowed to cure to a tack free state, typically 1-2 hours at 72 F, prior to top coating.