



Raven 155

DESCRIPTION

Raven® 155 is a two component waterborne epoxy with ultra-low viscosity.

TYPICAL USES

Use as a penetrating primer/sealer for new and existing concrete and as a polymer additive with high-early strength repair mortars. This product is particularly suitable to prevent out-gassing through topcoats and Raven Lining Systems recommends using Raven 155 to prime concrete exhibiting a moisture vapor emission rate greater than 3 lbs/1,000 ft²/24 hours, when tested according to ASTM F 1869.

COLOR

The Part A Resin is clear; the Part B Curing Agent is amber. When mixed the product is a milky color which dries to a transparent film.

SOLIDS BY VOLUME

As supplied: 78% solids
Volatile Organic Compounds: 0.0 pounds per gallon

FILM THICKNESS

Dry film thickness (DFT) or wet film thickness (WFT) may be calculated with this formula: $DFT = WFT \times \% \text{ solids} / 100$. A maximum of 8 mils per coat is recommended to prevent sagging. Recommended thickness when used as a primer or sealant is one or two coats at 8 mils each to saturate the substrates surface.

COVERAGE

When applied at 40% solids, coverage is 200 square feet per gallon at 8 mils wet film thickness, providing 3 mils DFT. Actual surface coverage will depend on substrate porosity and roughness. Good painting practices suggest application of two coats for quality assurance. Generally, a wet film thickness gauge may be used to determine actual coating coverage. However, this material is a penetrating primer and will be rapidly absorbed into the substrate making WFT measurement inaccurate.

APPLICATION

Apply with brush, roller, airless or air-assisted spray or other suitable method. For best results, apply this product to concrete when its temperature is stable or falling.

GREEN CONCRETE: Freshly applied Portland concrete surfaces should be lightly troweled and allowed to cure until it may be walked on without leaving a mark. Raven 155 diluted to 40% solids may then be applied by brush, roller or spray application.

POLYMER ADDITIVE: As a starting point, use 2 gallons of Raven 155 diluted to 40% solids as polymer additive liquids with 60 pounds of high-early strength repair mortar

THINNING

Thin only with potable water; suggested field use level at 40% solids is accomplished by adding water to the mix. Part A Resin:Part B Curing Agent:Water mix ratio is 1:1:2 by volume.

COMPONENTS AND MIX RATIO

Part A Resin:Part B Curing Agent mix ratio is 1:1 by volume. To attain the suggested field use level of 40% solids, add 2 parts potable water.

POWER MIXING

Individually power mix both Part A and Part B containers prior to measuring out 1 part of Part A to 1 part of Part B by volume into a clean disposable pail. Power mix combined A & B for a minimum of three minutes. Dilute by adding water while mixing another minute. Transfer contents to a clean pail and continue mixing at least another minute. Scrape the sides and bottom to obtain a thorough mix before application. Properly mixed material will be a uniform color without light or dark spots.

Example: Mix a 2-gallon kit at 40% solids. In a 5-gallon pail, add 1 gallon part A to 1 gallon part B and power mix three minutes. Dilute by adding 2 gallons water while mixing. Transfer to a clean pail and mix another minute before use.

CLEAN UP

To clean tools, use soap and water. For clean-up of part A only, use acetone, MEK or xylene. To clean skin, wash immediately and thoroughly with soap and water. Refer to the Material Safety Data Sheet for additional information on health and safety.

POT LIFE

The pot life is 45 minutes for one gallon at 72°F. The working life varies depending on the amount and temperature of epoxy mixed and the ambient temperature.

CURE TIME

This is a waterborne epoxy and humidity levels below 90% relative humidity are required for the water to evaporate and the coating to cure. Thin film set time varies with substrate temperature and application thickness. Environmental controls and/or additional ventilation may be required to lower the humidity level. Generally, the coating will be tack-free in 1 hour at 72°F and dry-hard in about 4 hours.

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When used as a polymer additive, reference the repair mortar's data sheet for cure and recoat times.

RECOAT TIME

This product may be recoated with itself as soon as it becomes tacky but does not transfer to the finger. Minimum topcoat time is when it cures to a dry-through state, generally 2 - 4 hours at 72°F substrate temperature. Maximum topcoat time is 72 hours at 72°F substrate temperature; higher temperatures will shorten these windows. Before recoating; inspect, clean and dry surface thoroughly to remove all contamination, including amine blush or condensation. If the recoat time is missed, clean and abrade surfaces prior to recoating.

SUBSTRATE TEMPERATURE

Minimum recommended substrate temperature: 40°F
Maximum recommended substrate temperature: 120°F

TEMPERATURE RESISTANCE

Maximum recommended dry temperature: 200°F. Wet temperature resistance depends on chemical concentration and exposure time.

SURFACE PREPARATION

Prior to coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale or deposits. In general, coating performance is proportional to the degree of surface preparation.

CONCRETE AND MASONRY surfaces must be sound and contaminant-free with a surface profile equivalent to a CSP2 to CSP5 in accordance with ICRI Technical Guideline No. 03732. This can generally be achieved by abrasive blasting, shot blasting, high pressure water cleaning, water jetting, or a combination of methods.

AVAILABLE PACKAGES

Available in pints (1 quart kit) and one gallon pails (2 gallon kit). Kits are supplied in the correct proportions of A & B; these two components must be mixed together before use. Raven 155 is available through Raven Certified Applicators.

SHELF LIFE AND STORAGE

Product shelf life is 1 year from purchase date in sealed, unmixed containers, stored in a sheltered area between 60°F and 80°F (15°C and 27°C).

SAFETY

Consult the Material Safety Data Sheet for this product concerning health and safety information before using. Strictly follow all notices on the Material Safety Data Sheet and container label. If you do not fully understand the notices and procedures provided on the MSDS or if you cannot strictly comply with them, do not use this product. Actual safety measures are dependent on application methods and work environment. Contact Raven Lining Systems to obtain a copy of the Material Safety Data Sheet at 800-324-2810.

TYPICAL PROPERTIES⁽¹⁾

DESCRIPTION	METHOD	RESULT
Hardness, Shore D	ASTM D 2240	70
Adhesion, Concrete	ASTM D 7234	Substrate Failure

(1) Typical properties are to be considered as representative of current production and should not be construed as specifications.

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