



# Raven 171

## DESCRIPTION

Raven® 171 is a solvent-free 100% solids, low viscosity penetrating epoxy primer or coating that may be applied to dry or partially damp surfaces. Designed to seal concrete and reduce off-gassing when concrete temperature is above 70°F.

## TYPICAL USES

Formulated for use as a primer on concrete, masonry or brick substrates in:

- Tunnels and pipelines
- Digesters
- Secondary containment
- Wastewater facilities
- Clarifiers
- Tanks
- Manholes
- Floors and wall

## COLOR

The Part A Resin is clear; the Part B Curing Agent is a “motor oil” color. When mixed, the product dries to a dark yellow, transparent film.

## SOLIDS BY VOLUME

100% solids by volume

Volatile Organic Compounds: 0.0 pounds per gallon

## COVERAGE

Apply to the concrete substrate until the surface is saturated. Theoretical coverage is 320 square feet per gallon at 5 mils wet film thickness (WFT). Actual surface coverage will depend on substrate porosity and roughness. Good painting practices suggest application of two coats for quality assurance. This material is designed to penetrate and will be rapidly absorbed into the concrete making WFT measurement inaccurate.

## APPLICATION

Apply with ¼” to ½” nap epoxy-compatible roller or airless spray system with a 0.019” to 0.025” tip. Adjust pressure as needed. Do not allow mixed material to remain in hose, gun, or spray equipment. It is good working practice to flush equipment between mixed units. For best results, apply this product to concrete when its temperature is stable or falling.

## THINNING

**Do not thin with solvents.** If lower viscosity is needed, heat unmixed material by placing the containers in hot tap water until the desired flow properties are obtained. Unmixed material should not be heated above 120°F.

## COMPONENTS AND MIX RATIO

Part A Resin:Part B Curing Agent mix ratio is 1:1 by volume.

## HAND MIXING

Individually 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. Completely mix combined A & B for a minimum of one minute before transferring contents to a clean pail. Continue mixing at least another minute, scraping the sides and bottom, to obtain a thorough mix before application. Properly mixed material will be a uniform color without light or dark spots.

## CLEAN UP

To clean tools, 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 25 minutes for one gallon at 90°F. Longer pot life is possible by mixing smaller amounts and/or icing down the part A & B before mixing.

## CURE TIME

Thin film set time varies with substrate temperature and application thickness. Generally, the coating will be tack-free in 4 hours at 90°F and dry-hard in about 4½ hours.

## RECOAT TIME

This product may be recoated as soon as it becomes tacky but does not transfer to the finger. When applying multiple coats, do not allow more than 24 hours at 90°F substrate temperature to pass between coats, higher temperatures will shorten this window. 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: 70°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

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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 one gallon kits (2 quarts of part A in a 1 gallon pail & 2 quarts of part B in a 1 gallon pail) and 2 gallon kits (1 gallon pail of part A & 1 gallon pail of part B). Kits are supplied in the correct proportions of A & B; these two components must be mixed together before use. Raven 171 is available through Raven Certified Applicators.

### SHELF LIFE AND STORAGE

Product shelf life is 1 year from purchase date in original unopened 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.

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## TYPICAL PROPERTIES<sup>(1)</sup>

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DESCRIPTION	METHOD	RESULT
Tensile Strength	ASTM D 638	1,870 psi
Tensile Ultimate Elongation	ASTM D 638	63%
Hardness, Shore D	ASTM D 2240	71
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.

Warranty and Disclaimer: Raven Lining Systems, Inc. ("Raven") warrants its products to be free of manufacturing defects in accord with applicable Raven quality control procedures and that they meet the formulation standards of Raven. To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. If, within one year from purchase, any product is proven defective, Raven, at its sole option, will either replace the defective product or refund the purchase price. This warranty is void if the product is used contrary to Raven's written directions.

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