



# Raven 171/171FS Primer Technical Bulletin

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## MANUFACTURER

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## DESCRIPTION

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

Raven 171 was designed to have a longer pot life along with more work time so it could be applied in warmer climates. Raven 171FS was designed to cure faster in cold climates there for maintaining coating productivity.

## MIXING AND APPLICATION INSTRUCTIONS

### Hand Application of Raven 171/171FS

Raven 171/171FS is most easily applied using a low knap roller. It can also be applied in corners and tight areas using a brush. Remove excess fibers from the roller by rolling across a length of duct tape.

Mix only a quantity of material that can be applied within 15 minutes by the number of persons applying the material (typically 1 gallon per person maximum). Measure 171/171FS material at a 1:1 ratio (A: B) and combine in a container. Mix thoroughly, pour mixed material into clean pail and mix again to ensure complete blending. Mix using a Hanson plunge mixer or similar mixing device. Avoid high speed mixing which may introduce air into the coating.

Pour the mixed material into a paint roller tray if using rollers. Apply to the surface until the surface is wetted out (5-8 mils coverage rate). Additional application will cause drips and runs.

Allow the material to cure until it is tack free (i.e. will not come off on your finger when touched) before applying additional coats or spray applying topcoat. This will take approximately 8-12 hours for 171 and 4-6 hours for 171FS depending upon surface and ambient temperatures.

### Spray Application of Raven 171/171FS

**Airless Gun:** Flex Plus with RACV 517 to 519 tip or similar

**Whip:** ¼" x 20' or similar

**Pump:** Airless, electric or other powered pump capable of delivering 2000 psi

The solvent pump typically supplied with the Raven application system is a 23:1 pump, which is capable of spraying 171.

**Material Temperature:** Minimum room temperature (75 F) for both Part A and Part B

**Spray pressure:** typically 1500-2000 psi

**Application:** 5-8 mils per coat. Successive coats of primer may be applied as soon as coating begins to gel. Topcoats should not be applied until primer is tack free.

### Procedure

Set up pump with no more than 40' of whip hose and specified gun/tip.

Have 2-3 gallons of flush solvent ready at all times. (MEK or Acetone).

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Measure 171/171FS material at a 1:1 ratio (A: B) and combine in a 1-2 gallon pail. Mix thoroughly, pour mixed material into clean pail and mix again to ensure complete blending. Mix using a Hanson plunge mixer or similar mixing device. Avoid high speed mixing which may introduce air into the coating.

*Mix approximately 1-2 gallons maximum at a time. Larger quantities will react faster than can be sprayed and may set up in the pail and pump.*

If the mixed material begins to gel in the pail while spraying immediately remove pump and flush with solvent. Do not pause from spraying once mixed material is going through the pump. A two gallon mass will begin to gel in approximately 15 minutes at room temperature. Higher temperatures will reduce pot life.

### **Spraying and Clean Up**

Place the mixed material pail inside a 5-gallon pail and place the pump into the mixed material (pump resting on the 5 gallon pail). The mixed material pail may need to be elevated so the bottom of the pump is near the bottom of the mixed material pail in order to pick up as much of the 171 as possible. An extension pipe may be added to the base of the pump.

Immediately begin spraying the material. Increase air pressure until a satisfactory pattern is achieved.

Apply to the desired surfaces at no more than 5-8 mils, covering the surface evenly, giving it a wet appearance.

Add more mixed material as needed to the mixed material pail.

Do not spray more than 30 minutes without flushing the pump.

To flush the pump, stop spraying and move the pump to a pail containing solvent. Pump solvent and epoxy through the gun into a waste pail until solvent comes through the gun. Once solvent comes through the gun pump for an additional 10 seconds into the waste pail. Remove the tip and guard and point the gun into the solvent pail through one of the ports in the pump lid. Pump solvent through the pump for 3-5 minutes. Clean the exterior of the pump cylinder thoroughly.