

I. INSTRUCTIONS FOR FRESHLY FINISHED CONCRETE

A. Surface Preparation

Freshly finished concrete surfaces require no surface preparation if Ashford Formula is to be applied as a curing agent immediately after the finishing operation. On areas where forms are recently removed, all form oil and breaking compound residue must be removed so as not to inhibit the penetration of Ashford Formula into the surface. Ashford Formula can be applied in temperatures from 35°F-115°F (1.7°C-46°C).

B. Application Instructions

Step #1

Immediately following the troweling operation, and as soon as the slab is safe to walk on, saturate the surface with the Ashford Formula at approximately 200 ft²/gal (5 m²/L) using a low-pressure, high-volume sprayer. Ashford Formula may also be applied by pouring it directly on the surface and spreading it evenly with a soft-bristled broom. **Note: Ashford Formula is a penetrant, not a membrane. Enough material must be on the surface to allow the Ashford Formula to thoroughly soak in. As a guideline, there should be enough Ashford Formula on the floor to fill-in a footprint within several seconds of taking a step. This is often referred to as a "flood coat" or "wet coat."** Once a wet coat has been achieved, work the Ashford Formula into the concrete surface with soft-bristled brooms. This step breaks surface tension and aids penetration.

Keep the surface wet with Ashford Formula for a minimum of 30 minutes, and then wait for the Ashford Formula to become slippery and gel-like under foot. In extremely cool, windless conditions, Ashford Formula can take up to 1 hour or longer to become slippery. In extremely hot conditions, Ashford Formula may begin to become slippery before the full 30 minute soak-in period. Additional Ashford Formula must be applied to the concrete in order to keep all areas of the concrete surface wet with Ashford Formula for at least 15-20 minutes before becoming slippery in these hot conditions. **Note: No spot or area on the slab should be allowed to become dry during the soak-in period. It is best to avoid dry areas, either by brooming excess Ashford Formula over the more absorbent spots, or by putting down more Ashford Formula. Pay particular attention to porous areas and slab edges, as these tend to dry out more quickly.**

Step #2

Immediately after the Ashford Formula becomes slippery, lightly mist the surface with water. This can be done with either a low-pressure power sprayer or with a hose and nozzle (nozzle should be adjusted to create a mist). This step will resolubilize the Ashford Formula so that it is no longer slippery or gel-like. Agitate the floor with a broom to aid the penetration of Ashford Formula. Wait for the Ashford Formula to become slippery or gel-like a second time.

Step #3

At this point, thoroughly flush the surface with water. During the flushing process, the floor should be agitated with brooms to help loosen and remove excess Ashford Formula from the surface.

Step #4

Thoroughly squeegee the slab dry by pushing the water ahead of you off the slab edge. At this point, the floor should look like bare concrete with nothing on it. **Note: During the squeegee process, there may be some slippery patches. This is an indication that excess Ashford Formula is still on the surface. These areas should be re-flushed and squeegeed again until the entire surface is dry.**

Additional Notes

- Steps 1-4 can also be accomplished with the use of an auto-scrubber. The auto-scrubber should be equipped with four pneumatic tires to prevent damage to the concrete surface. Driving across saw-cut joints at an angle will reduce the stress on the joint edges. Consult with the concrete contractor to determine the appropriate time to place the auto-scrubber on the floor to ensure the concrete is not too green and has enough compressive strength to support the weight of the auto-scrubber.
- Please consult with your local technical representative for questions regarding application in extreme or unusual weather conditions - hot, cold, windy or otherwise.
- When Ashford Formula is to be used as a curing agent, proper timing of the application is very important. According to the American Concrete Institute's (ACI) 308 *Guide to Curing Concrete* document sections 1.4.22 *Timing of Curing Procedure* - "Curing should be initiated when the concrete surface begins to dry, which starts as soon as accumulated bleed water evaporates faster than it can rise to the surface."
- In extremely hot, windy, sunlight exposed concrete slabs, Ashford Formula can be used in conjunction with any other type of curing system if the additional cure is applied after the Ashford Formula application for additional curing benefits.
- Saw cutting may be done before or after the Ashford Formula is applied, depending on the immediate need for curing. It is critical in either case that the dust or slurry from cutting be immediately and thoroughly removed from the slab.
- Abnormally porous or soft concrete floors may require additional applications of Ashford Formula. This also applies to surfaces with open finishes, such as broom finished or scarified floors.
- Burnishing the surface after 28-days with a 1700-RPM propane burnisher will help develop the sheen more quickly. For complete instructions, contact the manufacturer.

II. INSTRUCTIONS FOR EXISTING CONCRETE

A. Surface Preparation

The concrete surface must be free of any material that would inhibit the penetration of Ashford Formula. This would include any curing or sealing compound, paints or coatings, construction laitance, and any surface dust or dirt. In some instances, the floor may need to be stripped, in which case it may also need to be neutralized. **Note: All surfaces that will be painted, striped, or have a coating or adhesive applied should use Preference 1 as described below. For additional information, call 800-998-5664 for the name of your local Ashford Formula technical representative.**

B. Application Instructions

PREFERENCE 1

Follow the instructions for **Freshly Finished Concrete** (Section I). This will help ensure no whitening issues arise.

PREFERENCE 2

Step #1

Saturate the surface with Ashford Formula so the entire surface is wet with Ashford Formula for 30 minutes.

Step #2 (Option 1)

If after 30-40 minutes the majority of the Ashford Formula has been absorbed into the surface, broom or squeegee any excess Ashford Formula (while still in its liquid form) from all low spots and puddles so that all remaining Ashford Formula is entirely absorbed into the concrete or totally removed from the surface.

Step #2 (Option 2)

If after 30-40 minutes the majority of the Ashford Formula is still on the surface, wait until it becomes slippery underfoot, then thoroughly flush the entire surface with clear water and squeegee completely dry to remove all Ashford Formula residue. If the Ashford Formula becomes slippery prior to the 30 minute period, follow the instructions for **Freshly Finished Concrete** (Section I).

III. INSTRUCTIONS FOR EXTERIOR CONCRETE

A. Application Instructions

Step #1

Saturate the surface with Ashford Formula using a low-pressure, high-volume sprayer. Keep the entire surface glistening wet with Ashford Formula for 30 minutes.

Step #2

After the 30 minute application period, use a broom or mop to remove any puddles or concentrations of Ashford Formula from the slab. If after 30-40 minutes the majority of the Ashford Formula is still on the surface, wait until it becomes slippery underfoot, then thoroughly flush the entire surface with clear water and squeegee completely dry to remove all Ashford Formula residue. If the Ashford Formula becomes slippery prior to the 30 minute period, follow the instructions for **Freshly Finished Concrete** (Section I). **TIP: A wide, fine bristle push broom works well to disperse the Ashford Formula on textured surfaces.**

IV. INSTRUCTIONS FOR TILT-WALL APPLICATION

A. Tilt-Wall Application When the Ashford Formula is Used to Cure the Casting Bed

When Ashford Formula is used to cure the casting bed, follow the instructions for **Freshly Finished Concrete** (Section I). It is essential that particular care be given to the following guidelines:

- Ensure that all Ashford Formula residue has been removed from the surface of the casting bed during the flush and squeegee procedure. If certain areas are still slick during the squeegee operation, it is necessary to re-flush and re-squeegee the surface until the entire slab is free of any Ashford Formula residue. The concrete should appear as though there is nothing on it.
- Follow the bond-breaker manufacturer's application instructions. Also, follow the manufacturer's prescribed testing procedures for ensuring that enough bond-breaker has been applied for a sufficient period of time.

B. Tilt-Wall Application When the Ashford Formula is NOT Used to Cure the Casting Bed

It is critical that any substance used previously to cure the slab be completely stripped and/or removed from the surface of the concrete prior to applying Ashford Formula. Bond-breakers and/or curing agents (if left on the floor surface) will inhibit the penetration of Ashford Formula and cause whitening. These substances are designed to dissipate from the floor surface, but may not do so completely. Ashford Formula must be applied on clean, bare concrete. Qualified floor technicians must perform the floor preparation.

For guidelines on proper floor preparation, please contact a qualified Ashford Formula technical representative. To find a representative in your area, call 800-998-5664.

V. INSTRUCTIONS FOR VERTICAL SURFACE APPLICATION

A. Application Instructions

Step #1

Apply Ashford Formula to the surface of the wall with a low-pressure sprayer or roller, starting at the top and working your way along the wall. Apply sufficient material to thoroughly wet the surface without allowing excessive amounts to run down the wall.

Step #2

As you work your way along the wall, if any previously sprayed areas appear to be fully absorbing the Ashford Formula, re-spray those areas so that the entire wall is kept damp with Ashford Formula for 30 minutes.

Step #3

Allow the treated surface to dry. If the treated surface is to be coated or painted, or the natural appearance is to be preserved, thoroughly flush the vertical surface with water 10 minutes after the initial 30 minute application period.

VI. GENERAL GUIDELINES FOR ALL ASHFORD FORMULA APPLICATIONS

- Apply with low-pressure sprayer only. Do not use airless sprayers, as they atomize the material, allowing inhalation.
- May cause eye and mucous membrane damage. Avoid contact with eyes and mucous membranes. If contact occurs, flush with water for 15 minutes.
- If taken internally, do not induce vomiting. Drink large amounts of milk or water. **CONSULT A PHYSICIAN IMMEDIATELY.**
- Surfaces treated with Ashford Formula temporarily become slippery during application. Exercise care and caution to avoid falls.
- Avoid contact with glass, aluminum, or other glazed or finished surfaces including painted finishes. Where contact occurs, immediately wipe with a damp cloth or flush with water. When applying near windows, mask the glass.
- Protect from freezing. If frozen, thaw and agitate before using. Do not use on cinder block or other highly porous material, which contains holes or air pockets.
- When used near blacktop, Ashford Formula must be flushed away with water to eliminate any white discoloration that may appear when the surface is dry.