# Richlite®
# Fabrication Manual

Richlite® is a remarkably durable, versatile, and eco-friendly material crafted from resin-infused paper, suitable for a wide range of fabrication applications. This guide details the procedures for receiving, handling, and fabricating Richlite® paper composite material. By adhering to these guidelines, you'll be well-equipped for a successful and gratifying experience with Richlite®. Notably, Richlite® distinguishes itself from other materials on the market. The fabrication process is straightforward when following these instructions and yields highly rewarding results. Richlite® is produced as a sheet product with factory-finished surfaces and rough-cut edges and can be easily fabricated using standard tools for stone, solid surfaces, or woodwork. For further details or questions based on the information below, don't hesitate to contact your supplier.



# Index

## Delivery, Handling, & Storage

# Delivery Options

- Richlite® is manufactured in and shipped from our factory in Tacoma, WA, USA; WILL CALL options are also available.
- Material is prepared for shipment on heat-treated pallets covered with plywood and/or Cor-X.
- A forklift will most likely be required at the receiving location. Full pallets weigh approximately 3,000 Lbs.; please consider accessibility to the site or shop, including hours of operation.
- There will be additional charges for Limited Access Deliveries, Lift Gate, Residential Delivery, and notification/Appointment requirements. To avoid additional accessorial charges, please note any delivery restrictions at the time of order placement.

# Inspection

Every effort has been made to provide high-quality material free of defects. However, you must:

- Inspect material immediately upon receipt or at the time of will-call.
- Conduct a final inspection before fabrication.
- List of what to look for:
- Color: The panel's color, shade, and grain may vary from sample. Patina and oxidation will affect product color (lighter colors in particular). See website for details.
- Striations: Striations are typical in the product. Striations appear as mottling running in a grain pattern following the length of the panel. Occasionally, slightly darker straight lines will appear running the length of the panel. This is a common occurrence created during the paper-making process.
- Wrinkles: These will appear like a dark, jagged line running diagonally across the panel. If wrinkles are present, please get in touch with your supplier for warranty replacement information.
- Surface Conditions: Minor damage, such as light scratches or scuff marks, can typically be removed by simply wiping the surface with a damp cloth. If you encounter larger imperfections like bumps or divots, please get in touch with your supplier for assistance.
- Thickness: Tolerance is +/- 4%
- The factory rough-cut edge is to the exact stated dimension and not oversized.
- If the material is defective or flawed, you can either:
- Avoid flaws via part placement on the sheet.
- Selecting the side to use:
  Evaluate both sides of the sheet to determine which side is more desirable. There is no “A” or “B” side to Richlite®.
- Order replacement material and initiate a credit request.

**Richlite® warranty covers manufacturing defects only; pre-fabrication inspection is very important.**

## Replacement Material

Notify your Richlite® supplier via e-mail with the following information:

- Photos of the material in question.
- A copy of the invoice for the affected material (PO#, SO#, Invoice#, etc.).
- A written description of the defect.
- Any other pertinent information.

Your supplier will reply with either an authorization to return and/or a decision to approve or deny the credit. Credit memos usually encompass the initial cost of the replacement material and the shipping expenses for the replacement and the returned items (if applicable). A credit memo will be provided once the return shipment has been confirmed.

Please note that Richlite® does not provide credits for fabrication or material handling costs. Conducting a thorough inspection prior to fabrication is crucial to prevent the use of defective material.

## Storage & Handling

- Do not store Richlite® uncovered. Cover with a piece of 7mm plastic sheet or the Cor-x® that came with the shipment of Richlite®.
- Richlite® weighs 6.5 lbs. per square foot at 1” thick.
- Store between 40°- 80° Fahrenheit.
- Store flat. Do not store on edge; storing on edge may cause warping.
- Stone forklift edge clamps can be used.
- Anver® vacuum lift VPF-57-DC is ideal for forklift or gantry material handling.

# Cutting

## Rough Cutting

Rough-cutting Richlite® is a quick way to process panels that do not require a finished edge. Some examples include exterior paneling, non-visible fabricated edges, mating assemblies, and industrial applications. Due to the weight of the material, stationary cutting with a circular saw, panel saw, or CNC router is preferred over table saws. While CNC routers are a good tool for certain operations, as noted below, rough cutting and routing by hand are very efficient ways to process Richlite®. Festool® track saw is an ideal cutting setup.

- Standard circular saws can be used but often leave saw marks due to their less stable nature and lower RPM motors.
- Single-pass cutting can be achieved if the proper blades are used. Appropriate feed speeds are critical in this situation and will be a function of thickness and even, in some cases, color.

## Finish Cutting

Finish cuts can be made with a high-quality circular saw like a Festool® track saw, or worm drive high horsepower unit. Feed speeds and high rpm will ensure a clean cut. A very light pass with a sharp proper blade can provide a cut requiring minimal sanding to achieve a quality edge treatment.

- An even rate of speed will prevent burn marks, which can be routed off but are difficult to sand off.
- For mated seams, routing or finish cutting will result in a tighter seam.
- Sliding table saw speeds between 3,450 RPMs and 4,000 RPMs.
- Jig and hole saws are not recommended as the blades wear out quickly.

# Equipment

## Saws

- Festool® model TS 75 or TS 55
- Circular saw
- Sliding table saw

## Saw Blades

- Festool® #495387 10” 80 tooth, negative 5-degree hook. Kerf 2.5 mm
- Festool® #495386 Solid Surface/Laminate Blade for Kapex® Miter Saw - 64 Tooth
- Amana Tool® Double Sided Melamine and Laminate Blade Line “MB” series
- FS tool 7.25 x .115 x 5/8 x 40T, triple chip negative hook
- Laminate and melamine blades from various manufacturers that follow the general specifications of the above blades

## Finish Edge Routing

After cutting with a saw, a finished edge can be achieved using a router.

- 1/64” of material or less for the finish pass.
- Large diameter bits and larger horsepower routers will provide a smoother finish cut.
- Smooth and consistent feed speeds without hesitation will avoid burning the edge.

## Plunge Routing

For inside shapes and large holes, plunge routing is the best solution.

- Large shapes and interior cutouts can be achieved using templates.
- Use a stepped cut process; do not plunge through the material. A good rule of thumb is to use no more than the bit's diameter as your depth of cut per pass.
- When cutting out a small hole, make multiple passes and use a jig to ensure a safe operation.

## Profile Routing

Any standard wood or stone decorative, round over, or chamfer router bit profile can be cut into Richlite®. Route the edge detail or round-over per client specification. Use a sharp carbide bit and an even rate of speed to prevent burning. Multiple passes may be required for removing large amounts of material and deep profile shapes. Sand the edge detail by hand or with sponge sanding blocks. Due to the way Richlite® is manufactured, sharp square edges can be achieved but are prone to impact damage. At a minimum, a 1/16” chamfer or radius is suggested.

## Equipment

## Routers

- 3 1⁄4 Horsepower minimum
- Variable speed
- Solid carbide straight flute bits
- Standard carbide profile bits
- Festool® Track Saw

## CNC Machining

Richlite® is a very dense product. It is imperative to have a specific router bit to cut to protect the machine, the router bit, and the operator's safety. CNC machining is an excellent way to fabricate curves and large cutouts. Feed rates with CNC routers and machining centers vary depending on the tool. Please consult your machine tool salesperson for more information regarding the specific application of cutting paper composite material or phenolic resin panels.

**The following technique is an excellent baseline to start:**

- Machine example is MultiCam® 5000 Series.
- 1” to 2-1/4” – rough cut with Her-Saf® 1/2”+.015”, or Vortex 5853, leaving an “onion skin” vacuuming dust from each pass, and finish with 1/2” compression. Feeds and speeds are 175 IPM (inches per min. or 4400mm/min.) and 16000 RPM.
- 1/4” to 3/4” – rough cut with two flutes 3/8” down-cut spiral or Vortex 4250 at 18000 RPM and 300 IPM, leaving an “onion skin” vacuuming out the dust from each pass, and finish with two flutes 3/8” compression bit at 18000 RPM and 200 IPM.
- Max depth of cut is 1/4” per pass. Rough cuts are 1/64” over-sized from final dimensions. The last pass cuts the 1/64” at full depth in a single cut, and the length of the cut's lead in (and lead out) is twice the thickness. Typically for all parts processed, we do not cut through the material until the finish cut. Leave a small “onion skin” (about 0.02” thick) at the bottom to help hold smaller pieces in place. Always lead in and out of cuts at a 45-degree angle with a 1.5” lead-in.
- Drilling: Rotation 4000 RPM, lowering speed for 5mm bit is 1500mm per minute (60 IPM), slower for larger bits.

# Recommendations

Her-Saf® bits are good to use for the roughing process. These bits are designed with a removable down-cut head 5/8” in length. The cost of the head is about half of the solid carbide spirals and is interchangeable with other sizes. The primary bit is the #H-0515 (1/2”+.015”) on a 1/2” shank. The extra .015” is intended to make a full dado cut in a single pass for 1/2” material. That extra size makes enough clearance for the rest of the shaft when cutting deeper than the cutting head. One can use two different lengths of 1/2” shanks to mount the bits. The #HA-50AL is a 2-3/8” shank that is good for material up to 1-1/4” thick, and the #HA-50AT at 3-1/4” length works for material up to 2-1/4” thick.
Remove the dust from each pass using the Her-Saf® bits (or any down-cut bit) to cut Richlite®. Vacuum it or blow it out with compressed air – removing the dust from the cut on each pass will double the life span of your down-cut bits. Spraying bits with Bostik® Bladecote™ (formerly known as DRICOTE®) will also lengthen tool life considerably. www.hersaf.com
For the finish bit, use Onsrud® #60-172 1/2”, two-edge compression bit, 1 5/8” cutting edge to remove the final 1/64” at 16,000 RPM and 4,400 mm/minute. This gives a perfect finished edge for material 1” to 1 1/2” thick material, and lasts much longer. This bit will not work on 3/4” or thinner material because of its cutter configuration. For the 3/4” material, use Onsrud® #57-320 (3/8” 2-edge down-cut spiral) for rough cuts and Onsrud® #60-123MW (3/8» 2 edge Compression bit 7/8» cutting edge) for the finishing cut.

## Drilling

# Through-Hole Drilling

Through-hole drilling is very similar to drilling into hardwood. The speed rate should be set to avoid burning or polishing the inside of the hole. Holes drilled thoroughly through Richlite® should consider the tolerances of the overall parts being fabricated. Part assemblies that are casework construction, attached to metal or wood, or exterior applications such as cladding should have oversized holes to accommodate the expansion and contraction of the materials. Richlite® is very stable and solid; other materials can be damaged if accommodations are not considered for movement.

# Pilot Hole for Tapping

Richlite® can be drilled and tapped and has excellent screw-holding ability. Plastic expansion inserts are not recommended as they tend to be engineered for soft compressible material and will not grip appropriately in Richlite®. Standard tap drill specifications for metals can be used on Richlite®.

# Pilot Hole with No Tapping

Drill a pilot hole that is slightly smaller than the screw thread. Because of its density, Richlite® is nearly impossible to screw into without a pilot hole. The pilot hole should be slightly longer than the screw. You may not be able to penetrate the hole further after your screw reaches the end of the pilot hole, and there is a possibility of damaging the product or pushing through the other side.
Pilot holes for pan head sheet metal screws:

- #8: 9/64” – 5/32”
- #10: 11/64”-3/16”
- #12: 7/32”-1/4”

# Equipment

- For small holes, use titanium or cobalt bits
- Step drilling up from smaller to larger sizes will ensure accurate hole dimensions and location accuracy.
- Hole saws are not recommended for use on Richlite®. Due to its density and heat retention, hole saws do not remove enough material to work effectively before wearing out.

## Seaming, Gluing & Fastening

### Biscuits

Do not use traditional wood biscuits, as they will not expand nor provide a mechanical advantage. Place Lamello® K20 clamping plate every 6” starting with the first biscuit 1” from the side. Drying fit before final assembly is essential to ensure a tight fit once the epoxy is applied. Cut a slot in the center of the material, indexing from the top, as Richlite® may have slight thickness variation. Biscuits are engineered with a directional “tooth” that will be difficult to remove in the direction opposite the tooth. To remove the biscuit after dry fit, grab the tip or point end of the biscuit and pull in an arc away from the opposite end.

### Splines

1⁄4” Richlite® splines are an excellent choice for strength. Cut so that when installed in the slot, the spline's grain (paper layers) follows the same direction as the grain in the sheet.

### Tight Joint Fastener or “Dog Bones”

For use in non-structural situations only, these are ideal for field installations by sub-contracted or remote site installers.

### Epoxy Only

Make sure the joint gluing surfaces are roughed-up, 100 grit or less, for better glue adhesion. Do not over-tighten clamps to keep enough glue in the seam. Vacuum clamp fixtures work well for surface alignment.

### Mechanical Fasteners

Mechanical fasteners are acceptable for situations where there is access to install them.

### Built-Up Assemblies

Richlite® can be specified in applications where stack laminations are required. Examples include mold and die units, part assemblies, extra thick design elements, and countertop or casework built-up edges. Please note the following guidelines when fabricating these assemblies.

- It is critical for this application to abrade the mating surfaces for proper adhesion. This applies to both stack laminations as well as mitered or butt-joined fabrications.
- If the surface is abraded insufficiently, with 100-grit sandpaper or less before gluing up, there will most likely be a failure in the joint at some point due to moisture or impact. The mill finish and machine-cut edge are highly resistant to proper adhesion regardless of adhesive due to the material's low porosity.
- Built-up edges need to be at least 1-1/2” deep to ensure enough surface area for the mating parts to adhere and not create an imbalance on the front edge of the material. Any edge less than this will be prone to movement and instability.

- Mitered edges are acceptable and require the same abrasion technique on all mating surfaces. Any mitered edges less than 3/4” should be backed by a support block of Richlite®.
- The edge of Richlite® is not the same as the face of the panel, and a built-up/stacked edge will not look the same as a mitered edge.
- There are no maximum build-up dimensions.
- Built-up or mitered material must be 1⁄2” thick or more.
- Two-part water-resistant epoxies formulated for thermoset resins or phenolics are recommended for this application. Most other countertop adhesives WILL NOT be appropriate for use with Richlite®. We suggest System Three® T-88 for any structural bonding. Loctite® E-30CL or Devcon® DEV-20845 5-minute epoxy is also acceptable.
- Screw clamps are recommended to ensure a good bond with structural epoxies. SPRING CLAMPS WILL NOT WORK.

These are general guidelines, and it is recommended that the individual fabricator test and fabrication the technique that varies for the ones described above; each situation may have differing parameters that will affect the performance of the joints and laminations. These guidelines do not imply any warranty of work provided by independent fabrication companies and are superseded by the Richlite® material warranty.

# Equipment

## Clamps

Traditional mechanical screw type and vacuum clamps. Using screw clamps will ensure a good bond with structural epoxies.

## Biscuit Cutter

DeWalt® 3751-5 minimum power- 6.5 amps

## Two-Part Epoxies

- Industrial epoxies formulated for thermoset plastic or phenolic resins
- 5 Minute General Purpose Epoxy: Devcon® DEV-20845
- Loctite® E-120HP, Hysol
- 3M™ Scotch-Weld™ Epoxy Adhesive DP125
- System Three® T-88 for anything structural

## Edge Connectors

- 1/4” Richlite® splines
- Lamello® K20 Clamping Plate
- Mechanical Joint Fasteners such as KV 516 Tite Joint Dog Bone Fastener or draw bolts.

**NOTE:** Do not use standard #20 biscuits. Lack of water in epoxy does not expand the biscuit.

## Material Surface Options

# OPTION 1: Factory or Mill Surface

The “factory surface” has a slight texture created during the manufacturing process and acts like a light skin over the faces of the panel. No finish product is applied as a surface treatment.

For exterior applications, a dry factory finish is recommended. If sanded and placed in an exterior environment, the surface will oxidize rapidly and appear chalky and dry.

| **PROS:** | **CONS:** |
|---|---|
| No additional work is required for surface preparation or finishing.<br><br>No edge finishing is required. | Material that has been handled may have slight abrasions, not repairable or restorable to the exact finish from the factory. Top surface alignment is critical and requires additional attention. |

EXAMPLES: industrial parts and sub-assemblies, exterior cladding, interior wall panels, benches and seating, high-wear area assemblies and furniture, and interior and industrial work surfaces.

# OPTION 2: Leathered

Any finishes listed in the Applied Finish section can be used on a Richlite® panel with a factory surface. Seaming is critical since Richlite® cannot be sanded or feathered like other solid surface materials.

| PROS: | CONS: |
|---|---|
| A more finished appearance.<br><br>Easy to care for. | Material handled may have slight abrasions, not repairable or restorable to the exact finish from the factory. Top surface alignment is critical and requires additional attention. |

EXAMPLE: Countertops, interior wall applications, furniture, and work surfaces.

# OPTION 3: Honed

A honed finish will have light 150-grit sandpaper swirls evident. The honed finish has a satin appearance that is very nice for millwork and countertop applications. It is not recommended for exterior applications. It requires applying a finish product after sanding to achieve proper performance.

| PROS: | CONS: |
|---|---|
| More polished and satin-finished look and feel.<br><br>Examples: interior wall panels, seating | Slightly less durable surface; the finish is prone to abrasions and hard material wear.<br><br>Not recommended for a high-use area |

# Surface Preparation Process & Techniques

## Leathered

(Preparation for an applied finish)
Scotch-Brite™ Only Technique

1. Sand with Scotch-Brite™ on a random orbital sander in a 12” circular motion to mildly abrade the surface and to remove slight marring or surface imperfections.
2. Avoid aggressive or over-sanding, as most minor abrasions will disappear during the finishing process; aggressive machining will make a more polished spot in your final overall surface.
3. Clean with soap and water. Allow the material to completely dry before applying the finish.
4. Apply finish as directed on the label.

## Honed

(Preparation for an applied finish)
Sanding and Scotch-Brite™ Technique

1. Using a random orbital sander with 150-grit sandpaper, go over the surface area lightly and evenly. There is no need to apply pressure, just enough to keep the sander on the surface.
2. Sand the length of the sheet first.
3. Turn 90 degrees and sand perpendicular to the initial pass.
4. Follow with Scotch-Brite™ in 12” circular motion to even linear sanding pattern.
5. Clean with soap and water. Allow the material to completely dry before applying the finish.
6. If sanded with no applied finish, the surface will appear “chalky” and pick up oils from fingerprints, food, etc. While it is possible to polish Richlite® to a high finish, this is not recommended as it quickly shows scratches and wear.
7. Apply finish as directed on the label.

## Trouble Shooting

## Field vs. Shop Work

Fabricating with Richlite® can be a dusty process. Fabricating or finishing in the field is not recommended. The dust created, and the Richlite® Pro Finish in a home can create air quality issues that can pose a problem for end-users. Sealing will require blue tape on seams to ensure the adhesive overflow does not compromise the surface finish.

## Over sanding

Richlite® is made with cellulose fibers (layers of paper). If you sand too aggressively in one area for too long, you will create something like a “topography” map by burning through a layer of paper. It is most noticeable in darker colors. Be cautious with seams and uneven surface areas (bumps or divots). After applying the finish, these may even out, but the lines will never disappear. The contouring is more noticeable in the Slate colorway and less in the Black Diamond.

## Sanding Too Aggressively

Aggressive sanding will develop an extremely mottled pattern, especially noticeable on Black Diamond. Use only a random orbital sander on the finished surface without added pressure.

## Repair

- Use router dust mixed with epoxy in thick paste form for minor spot repairs. The depth of repair may need to be made more profound for repair.
- Use melamine or laminate patch for minimal spot repairs

## Applied Finishes

# Richlite® Hard Wax

Hard Wax is an excellent choice for all-around applications. The finish is a hard wax-oil combination that is highly refined so that it does not separate. It performs like an air-cured wood finish and does not stay waxy or soft like most oil-wax products. It also acts as a better repellent to watermarks, stains, etc. This is the preferred finish for residential use as it has low VOCs and can be a field applied. It is compatible with the Richlite® enhancer and can be used to spot repair on top of both the enhancer and itself. The cure times are longer than a solvent-based product but will set up to the hardness of such finishes a complete cure.

# Applying Hard Wax

When finishing the surface with Richlite® Hard Wax, first abrade the surface as detailed above. Please read the instructions on the can. Apply the finish as desired, including the edges. Hard Wax has a much longer dry time, so you can work at an average speed compared to Pro Finish.

Follow with clean, dry rags, wiping in a circular motion to remove excess finish. Buff to an even, matte finish. When the rag becomes saturated, use a fresh rag to avoid streaking. Hard Wax will blend into previous coats and can be used as spot repair for itself and Richlite® Pro Finish in the field. Apply one coat, allowing 12 to 48 hours for curing. It can be used sooner, but waiting as long as possible is best. A complete cure is achieved after 48 to 72 hours. A second coat can be applied for a slightly higher sheen but is not required.

# Richlite® Professional Finish

Richlite® Color Enhancer is a food-safe polyurethane finish recommended for residential and commercial projects and should be applied in a shop environment. It has a quick flash time, an advantage for a quick turnaround, but it requires skilled application and training to use correctly. It is not recommended for high water exposure applications as it tends to show water rings.

# Applying Richlite® Professional Finish

When choosing Richlite® Color Pro Finish, first sand the surface as detailed above. Please read the instructions on the can. Although field use is not recommended, if the surface is being finished in the field, it is essential to mask adjacent edges and walls to protect them from the finish. Apply the finish liberally across the entire surface, including the edges. Work quickly to avoid streaking. Avoid warm or circulating air, which will shorten the drying time. Follow with clean, dry rags, wiping in a significant circular motion to remove excess finish. Buff to an even, matte finish. When the rag becomes saturated, use a fresh rag to avoid streaking. If streaks are visible, let the surface dry and Scotch-Brite again to attain an even surface. Clean with soap and water and reapply the finish. Color Enhancer will not blend or "burn" into previous coats. Apply two to three coats, allowing 20 minutes between coats. Sanding is not required between coats.

## Other Finishes / Teak Oil / Mineral Oil

Other finish products have been used successfully by fabricators and installers but have not been approved by Richlite®. Richlite® can be painted or finished with most wood or stone finishes. Richlite® recommends doing a test sample before using products not recommended in this manual. Customers with success in the field have used teak oil, urethanes, and stone finish products. Mineral oil can be used as a "finish" but requires frequent maintenance. Because Richlite® is non-porous, the oil does not penetrate the surface, and watermarks may appear from glasses and tableware. Paper products on a desk will pull oil from the surface and leave dry areas. If you use soap and water to clean, be aware that the soap will expedite oil removal, making the surface appear dry and chalky.

# Equipment & Supplies

## Finish Products

Richlite® Hard Wax
Richlite® Processional Finish (Pro Finish)
Available through the Richlite® website

**Other options**

OSMO® PolyX

- PolyX-Oil 3054 Clear matte
- Top Oil 3058 Clear Satin
- PolyX Professional Oil 5125 Clear Satin

Contact Richlite® if you use products not listed in the fabrication manual.

# Tooling & Abrasives

## Sanders

- Electric or pneumatic random orbital sanders (5”-6” diameter recommended).
- Belt sanders are not recommended! Heat retention will burn Richlite® edge surfaces.

## Abrasives

- 150-grit sandpaper. This is very important as higher or lower grit will not provide the finish to match the manufacturer-provided samples in the specifier boxes.
- Maroon Scotch-Brite™ Pads (7447 Pro Disc)

## Other materials:

- Clean cotton rags for applying and buffing Richlite® Hard Wax and Richlite® Pro Finish.

## Care & Maintenance

# Interior

# General Precautions

- Richlite® is stain resistant to most common substances on interior applications.
- In residential applications, some raw meat juice (such as liver), high-alkaline fruit or vegetables (such as papaya and red beets), red wine, and high-alkaline soaps (such as automatic dishwasher powder and oven cleaners) may cause staining when left in contact for a prolonged time.
- The lighter colors in the Richlite® range will show more stains than darker ones. Additionally, grout (high alkaline) will lighten darker-colored Richlite® counters and darken the lighter tones.
- Avoid using bleach products or abrasive powdered cleaners. It is good to avoid using the abrasive side of sponges as this may also scratch the surface of a Richlite® countertop.
- Generally speaking, Richlite® resists stains quite well. As with most any material, there is a potential for some staining. With stubborn stains, try a nonabrasive household cleaner. A unique stain remover is plain yogurt, applied only to the stain area. Let sit overnight for 3-4 applications, wiping away in the mornings to lighten stains.

# Factory Surface

- Often requires very little maintenance due to textured surface.
- Wet rag (mild soap & water) for other applications.
- Cleaning agents may affect the surface not protected by an applied finish.
  Repairs: complicated to repair as the textured surface will show any changes and cannot be reproduced.

# Leathered Surface

- Warm water and sponge for daily cleaning. Mild soap can be used if needed.

Repairs:

- Minimal Scotch-Brite® work can be done before applied finishes.
- Richlite® hard Wax is an excellent spot repair product that the end user can apply.
  Wipe on a small amount and buff into adjacent areas. Allow to dry 24-48 hours before full use.
  It is compatible with Richlite® enhancer and blends very well with a similar finish.

# Honed Surface

- Warm water and sponge for daily cleaning. Mild soap can be used if needed.

Repairs:

- Refinishing should be advised by the dealer or fabricator who installed the counter. In most cases, it is preferable if the trained installer refinishes the surface.
- Light scratch and burn marks can be refinished using a Scotch-Brite™ pad (#7447/Red Color) on a random orbital sander.

It is important to note that the refinished area will noticeably lighten compared to the surrounding Surface area. Richlite® surfaces are made of paper which, like wood, patinas – or darkens – over time, Especially in lighter colors other than Black. The area will eventually patina and match the remainder of the counter surrounding it. To avoid affecting one spot, a complete sanding and refinishing of the entire counter is required, but this is intensive and not inexpensive.

# Exterior

## General Precautions

- For exterior applications, flashing and proximity to metal or water may require additional attention or maintenance.
- Graffiti/Spray Paint: paint and graffiti removal products can be used. Pressure Washing can be used for extreme situations but may alter the factory surface slightly. This process will leave a more matte finish. Over time, the variation will blend with the natural oxidation process.
- Applied finishes or sealers are not recommended as they will flake and deteriorate from UV exposure.
- Normal wear and tear due to elements will change the surface over time and oxidize similarly to cedar siding.