Fabrication Guide

This fabrication guide has been prepared to assist the fabricator and installer in the proper methods for seaming, polishing, patching and handling our 100% acrylic and Studio Collection® of specialty blend solid surface products.

Avonite® brand building and surfacing materials are warranted to be free from defects at time of manufacture. Any materials found defective will be replaced promptly.

Information or references to application, code compliance or specific standards are provided for convenience only. The accuracy or suitability of any recommendations in this guide must be verified by the user, Aristech Surfaces LLC disclaims any legal responsibility.

Questions pertaining to any procedure detailed herein should be addressed to the Avonite® Technical Services Department.
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Name: ____________________________________________ Date of Seminar: _________________________________
Address: __________________________________________ Instructor: _________________________________
WHO WE ARE

Since 1983, the Avonite® brand has been a pioneer in solid surfacing. We have been known for our unbridled passion and spirited innovations. We have been with many of you from the beginning. For more than 30 years, we’ve celebrated the relationship between extraordinary product, design and craftsmanship. We are inspired by and committed to designers and fabricators with a passion for bringing forth original ideas and taking them beyond the ordinary.

HOW TO USE THIS GUIDE

We at Aristech Surfaces LLC hope you will find the following Fabrication Manual to be a useful tool. It was created to help you discover unlimited design possibilities, which will lead to wonderful solutions for you and your clients. Although many applications are covered in this guide, there will be new applications that may not be covered in detail. Our fabrication guide is designed to provide you with the fundamental knowledge of fabrication. These fundamentals can be adapted for new applications.

If you have specific questions or requests, our friendly and expert technical staff is eager to help. Feel free to call your regional representative or contact us at +1 (800) 428-6648.

Important updates such as Technical Bulletins published after the printing date of this manual are also available for download. Certified fabricators should periodically check for updates and add them to this guide. For additional copies of this guide or quick references for your clients, please visit www.aristechsurfaces.com, where the complete guide and individual sections are available for download.
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Avonite® Product Introduction

For over 30 years the debate of polyester versus acrylic solid surface has rumbled through fabrication shops. Aristech Surfaces LLC is in the unique position of offering both types of products. These product types share many common characteristics but some Avonite® products are so unique that they deserve special recognition for their applications and fabrication techniques.

To Fill or Not to Fill

The majority of solid surface products are composed of polymer resins and a mineral filler called alumina trihydrate (ATH). The resins are typically polyester, acrylic, or a blend of the two. Polyester resin is a thermoset polymer while acrylic is a thermoplastic resin. To produce a solid surface product with acrylic resin, you must add ATH filler. Only with the filler can you create an acrylic product that can be cut, shaped and sanded. Without the filler the acrylic resin is too soft. Solid surface products made with polyester resins do not require the ATH filler to be machined. Producers, therefore, have a choice of how much ATH filler to use.

ATH filler is a fine white powder that clouds the matrix. Products with high levels of ATH are opaque whereas products using small amounts can maintain their clarity and depth. This is where the Studio Collection® stands alone. We are the only major producer of solid surface that has chosen to create some products with minimum amounts of fillers to achieve depth and clarity found in no other solid surface product.

PRODUCT SUMMARY

Our 100% acrylic solid surface products bring innovation to today’s most popular colors. Our production facility allow us to produce acrylic solid surface up to 60” wide. This wide width can save you time and money by eliminating seams and reducing labor costs. These savings can be even more dramatic using our Right-Size sheet capabilities. Visit www.aristechsurfaces.com for details.

1/2" Standard Sheet Size is 30” x 144” x 12mm (76.2cm x 365.7cm x 12mm)
1/4” Standard Sheet Sizes are:
36” x 96” x 6mm (914mm x 2,438mm x 6mm)
48” x 96” x 6mm (1214mm x 2,438mm x 6mm)
60” x 96” x 6mm (1,518mm x 2,438mm x 6mm)

These products are made in the USA at our Florence, KY facility.

Shaped Products

Fully integrated sinks provide a seamless bond between the counter and sink leaving no space for bacteria to gather. This non-porous combination remains the wise choice for healthcare facilities and more.

Wet Wall Panel System

The Avonite® Wet Wall Panel system includes our seamless wide wall panels with optional pans and accessories. The standard wall panels are available in 30”, 36”, 48” and 60” widths and a full 96” high. These standard dimensions are stocked in eight popular colors and are available in all Avonite® 100% acrylic solid surface products.

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FOR SHEET AND SHAPED PRODUCTS

FIRST AID PROCEDURES:
Avonite® solid surfacing material is non-toxic; however, during fabrication such as sawing, routing, and sanding, dust consisting of cured resin and filler is generated. This dust is classified as “Nuisance Dust”.

INHALATION: a) “Nuisance Dust” — Overexposure to dust may cause irritation of the respiratory tract. Should this happen, remove the affected individual to fresh air. If symptoms persist, consult a physician. b) Styrene — Although no vapor build-up is expected, excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, and even asphyxiation. Remove the affected individual to fresh air. If symptoms persist, consult a physician.

SKIN OR EYE: a) “Nuisance Dust” — May cause irritation. Wash skin and flush eyes with water for at least 15 minutes. Contact physician if irritation persists. b) Styrene — Vapor concentration is expected to be too low to cause irritation, but odor is recognizable. Excessive exposure can cause severe eye irritation and moderate skin irritation. Wash skin and flush eyes with water for at least 15 minutes.

EXPOSURE CONTROL METHODS: Provide sufficient ventilation and dust pick-up at saw, sander, drill, or router to keep dust level below 10mg/m³ TWA (Time Weighted Average) for total dust, or provide and make mandatory the wearing of NIOSH approved fitted dust respirators. Wear protective leather or cotton gloves, safety glasses, and safety shoes when installing or fabricating Avonite® solid surfacing material.

DISPOSAL PROCEDURES: Dust from fabrication operations is non-hazardous. Collect in impervious bags. Dispose of dust and scrap in accordance with local, state, and federal regulations. FOR MORE COMPLETE INFORMATION, REQUEST THE MATERIAL SAFETY DATA SHEET.

INLAY RESIN

CAUTION:
• FLAMMABLE COMPONENTS; AVOID HEAT, SPARKS AND OPEN FLAME.
• WEAR SAFETY GLASSES AND PROTECTIVE GLOVES.
• FOR PROFESSIONAL USE ONLY.
• USE ONLY AS RECOMMENDED.

The Inlay Resin is a polyester resin used with MEK peroxide. These components and vapors may cause irritation of the skin, eyes, nose, and throat. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. USE ONLY WITH ADEQUATE VENTILATION; AVOID BREATHING VAPORS. WASH HANDS AFTER USE.

EMERGENCY AND FIRST AID PROCEDURES: In case the resin or catalyst contacts your skin, wash with soap and water, for at least 15 minutes. For eyes, immediately flush with water for at least 15 minutes. Contact physician if irritation persists. In case of ingestion, immediately consult a physician or your local poison control center, identifying the catalyst as methyl ethyl ketone peroxide solution in dimethyl phthalate containing a small amount of hydrogen peroxide, and the resin as an unsaturated polyester in styrene monomer.

SPECIAL HEALTH EFFECTS: Excessive inhalation of resin monomer may aggravate pre-existing medical conditions such as, but not limited to, chronic respiratory problems, skin disease, and central nervous disorders. There is a low health risk from inhalation of the filler dust. Avoid inhalation or eye contact.

DISPOSAL PROCEDURES: Un-reacted resin and hardener are classified as hazardous waste. All components should be disposed by mixing so that they react and become fully cured and solid. At this point, they can then be disposed in accordance with local, state, and federal regulations, as non-hazardous solid waste.

FOR MORE COMPLETE INFORMATION, REQUEST THE MATERIAL SAFETY DATA SHEET, or visit www.aristechsurfaces.com.
Health and Safety Information

AVONITE® SOLID SURFACE ADHESIVE

- FLAMMABLE COMPONENTS: Avonite® Solid Surface Adhesive Component A contains acrylic resin and Component B contains benzoyl peroxide. The liquid and vapors may cause irritation to skin, eyes, nose and throat and may cause an allergic skin reaction.
- AVOID HEAT, SPARKS, AND OPEN FLAME
- USE ONLY AS DIRECTED
- WEAR SAFETY EYE PROTECTION
- AVOID CONTACT WITH EYES, SKIN, AND CLOTHING
- HAVE ADEQUATE VENTILATION
- AVOID BREATHING VAPORS
- WASH HANDS AFTER USE

EMERGENCY AND FIRST AID PROCEDURES:

If the Avonite® Solid Surface Adhesive resin or hardener contacts your skin, wash with soap and water for 15 minutes. For eyes, immediately wash thoroughly with plenty of water for 15 minutes and consult a physician. In case of accidental ingestion, immediately consult a physician or your local poison control center, identifying the hardener as benzoyl peroxide in plasticizer and the resin as acrylic resin in methylmethacrylate monomer.

SPECIAL HEALTH EFFECTS:

Excessive inhalation of resin monomer may aggravate pre-existing medical conditions such as, but not limited to, chronic respiratory problems, skin disease, and central nervous disorders and may cause nausea and loss of consciousness.

DISPOSAL PROCEDURES:

Acrylic resin and hardener when disposed in liquid state are hazardous waste but when mixed and polymerized are non-hazardous solid waste. Dispose of used or unused Avonite® Solid Surface Adhesive by mixing components, allowing the mixture to solidify, and then disposing in accordance with applicable local, state and federal regulations. The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility.

FOR MORE INFORMATION
REQUEST THE MATERIAL SAFETY DATA SHEET,
or visit www.aristechsurfaces.com.
**Storage and Handling**

Avonite® material should always be stored FLAT and evenly supported. Figure A demonstrates a framed substrate. Figure B is an A-Frame storage bin.

Always carry sheets upright in a vertical position. To avoid chipping and scuffing, do not drop or drag sheets. Fabricated sections with angles or seams should be handled carefully with support at the angled or seamed area. A carrying board should be used for tops with cut outs (Figure C).

Avonite® can be transported lying flat on an evenly supported and padded surface. Large fabricated sections should be transported on edge. Pad the edges to prevent damage and brace to prevent movement (Figure D). When transporting Avonite® sheets in an exposed vehicle, pieces should be wrapped to prevent damage from extreme temperature changes. Avoid exposing fabricated pieces to direct sunlight. Uneven solar heating will cause distortion of fabricated parts. Allow pieces to cool to room temperature at the job site prior to installation.
Color Matching

Every Avonite® sheet has a sticker which displays an identification number. When ordering multiple sheets to be seamed, be sure that sheets come from the same batch.

Please notify the distributor of this fact when ordering. Advise that you need sheets with consecutive numbers. Although Avonite® sheets have been inspected prior to shipment, always remove the peel coat and inspect for color consistency, surface blemishes, warping, and dimensional consistency.

Remove the protective peel coat and arrange the sheets in the manner in which they will be installed. Sand 12”-16” (305mm - 407mm) of the surface to verify color match. After sanding, wet the material with alcohol or water.

For Studio Collection® sheets, be aware that the pattern at the edge and end of the sheet may be different from the center of the sheet. This may not be noticeable when looking at a single sheet. Always plan to trim 1”-2” (25mm-51mm) off an edge to be joined to another piece. Aristech Surfaces LLC does not honor any claims that have migration due to not trimming the sides or ends of the sheet when joining them together.
THE L-TEMPLATE

The L-Template is a convenient way to fabricate the L or U shaped counter top. The L-Template should be 10’ (305cm) long by about 30”(76cm) wide. The inside corner will have a minimum 1”(25.4mm) radius. The L-Template may be reversed and used for either side. Clamp the L-Template securely to the Avonite® material. Place some registration marks on the backside and end of the template. Use a 3 HP router and template guide for cutting. After cutting, turn the material bottom side up to bond on the drop edge and inside corner build up. When the Avonite® Solid Surface Adhesive has hardened, turn the material face up and re-clamp the L-Template. Using the registration marks, place the template far enough back to remove the excess material and Avonite® Solid Surface Adhesive. This will result in a clean and smooth edge requiring minimal sanding.

LOCATING SEAMS

When you lay out your job, consider where you need to place the seams. Make as many seams as possible in the shop and not in the field. All seams must be supported. Avoid placing seams in the following locations:

1. Inside corners minimum 2” (50mm)
2. In cut outs
3. Over dishwashers or other heat producing appliances
4. When using dark colors, avoid placing seams in direct sunlight

SEAM BLOCKS

The use of seam blocks is recommended for all seams. Seam blocks should be 4” (101mm) wide and at least 1/2” (12mm) thick. Join the seam block to the underside using Avonite® Solid Surface Adhesive. Spread the adhesive over the entire surface so there are no voids. The seam block should cover the entire length of the seam.

Seam blocks are highly recommended. Seams are not covered under warranty. The seam block provides you with the strongest seam possible.

Studio Collection® Glass and Petals Series products require different seam block methods. See section 1.8.
INSIDE BLOCKS

Avonite® material requires a minimum 1" (25.4mm) radius on drop edge inside corners. This diagram shows the recommended build-up. After the build-up is made, use a template to cut the desired radius (see L-Template).

TILE BACKSPLASHES

The transition from tile to Avonite® should be silicone sealed and not grouted.

TRANSLUCENT COLORS

Glass and Petals Series products are translucent and may require a seal coat of water based interior/exterior primer on the back of the sheet to reduce shadowing effects. For more information call the Avonite® Technical Services Department +1 (800) 428-6648.

EXPANSION AND CONTRACTION

Like all solid surface materials, Avonite® material expands or contracts with temperature variation. The following changes in length may occur with a swing in temperature of 55° F (31 °C).

Class I (Filled)—1/8" (3mm) for every 10' (304.8cm)

Class III (Unfilled)—3/16" (5mm) for every 10’ (304.8cm)

Always leave appropriate clearances for expansion and contraction.
NEW SEAM BLOCK METHOD
Previously the use of seam blocks on the translucent Petals and Glass Series was not recommended. The seam block location was apparent and back painting the sheets prevented good bond strength for the seam blocks. This challenge has been resolved by using adhesion primer for the back side painting. This high adhesion primer was developed for hard to paint surfaces such as PVC, glass, and tile.
Recommended:
INSL-X Stix Waterborne Bonding Primer or Sherwin-Williams DTM Bonding Primer
For the best results, continue preparing seams with the Wavy Bit. Once the seam is complete, turn the sheet over for the remaining fabrication. Clean the excess glue where the 4” seam block will be applied. Paint the back side with the adhesion primer. Two coats are recommended. Allow to dry completely.
The seam block must run the full length of the seam. Apply a generous amount of adhesive to the seam block and to the edge that meets the back of the buildup edge. Uniform weight should be placed on the seam block to assure even pressure as the adhesive is drying.

BACKLIT APPLICATIONS
For backlit applications, you may use 1/2” (12.7mm) acrylic to support larger spans. Using the 1/2” (12.7mm) acrylic sheet as a solid substrate is recommended. Frosted or white acrylic may be used to diffuse the light source. When adhering the Avonite® Glass or Petals product to the acrylic, we recommend small pieces of 3M VHB double sided tape. If clear acrylic is used, it should be sanded with 100 Micron to frost the surfaces. This will help hide the adhesive tape.
Always test a small piece to judge appearance.
Backlit Applications that require deck seams or have unsupported spans will require special consideration. Please call Avonite® Technical Service +1 (800) 428-6648 as you have questions.

SEAMING THE NEW PETALS
The new Petals products should be fabricated the same way as the original Glass Series. Because of the very large petal shapes, these products will have more conspicuous seams. The Petal products are hand crafted creating an organic patterns that have different petal flake concentrations across the sheet. This too will effect the appearance of seams in a completed top.
Designing and Fabricating with Metallics

The appearance and seaming qualities of our Studio Collection® metallic colors is different than conventional solid surfaces. These products have a light reflective quality that provides an optical effect or “direction” that shows lighter or darker depending on the angle from which they are viewed. This unique reflective quality allows patterns to be created where sheets are joined together. All seams will show this inherent reflective quality and will be visible unlike standard solid surface. The color will appear to change when viewed from different angles. These effects can be incorporated into your designs.

These directional patterns are not detectable in single sheet applications where no seam is required. Seams made from the same sheet will also be noticeable. Because of these conditions there will be no claims allowed for color matching of these products.

Designers and fabricators must consider these characteristics when using these three products. Contact Avonite® Technical Service for any questions +1 (800) 428-6648.

Silver Comet K3-8585
Avonite® material can be easily machined with ordinary woodworking tools, such as routers, saws, planers, lathes, drills, and sanders. All blades and bits should be carbide tipped.

**ROUTERS**

For general purpose routing, a 1-1/2 to 2 HP router maybe used. For heavier cutting of thick edges and cut outs, a 3 HP router is recommended. A 1/2" (12.7mm) shank carbide bit is needed to minimize chatter for all routing with the exception of small details like a 1/4" (6.3mm) round over or a pin stripe inlay. Avonite® Surfaces material should be properly supported during all phases of fabrication.

**CUT OUTS AND CURVED CUTS**

A template and a router is mandatory for all cuts. The use of a saber saw will leave a rough edge where stress cracks can occur.

Use a template for all inside and outside corner radiuses.

**Helpful Tip**

Two square feet of color matched material should be left on the job site for future repairs. Material should be placed under a bottom drawer or mounted to the inside of the sink cabinet. Mark the material to identify it is for potential repairs.
TABLE SAW

A table saw with a minimum 2 HP motor can be used to cut Avonite® materials. The sheets should be cut face up. A good quality rip fence is necessary for accuracy. A triple chip bevel saw blade is needed for a clean cut with minimum chipping. A 10” (254mm) diameter blade should have 40 teeth with a 20° positive hook. Raise the blade 1-1/4” (32mm) above the surface of the material for the best results.

RADIAL ARM AND MITER BOX

A triple chip bevel saw blade should be used for clean cuts. These saws require a 10” (254mm) diameter blade with 60 teeth and a 5° positive hook.

TOOLING SUPPLIERS:

- Forrest Manufacturing 1-800-733-7111
- Monument Toolworks (Parallign) (508) 644-2400
- JCM Industries, Inc. 1-800-669-5519
- The Pinske Edge 1-800-T-PINSKE
- Festool Power Tools 1-888-337-8600
- Velepec (Router Bits) 1-800-365-6636
Machining Seams

Use a good quality 1-1/2 – 2 HP router. Refit base with square base. Two dimensions on base allow you to turn base and remove an additional 1/16” (1.5mm). Always use a 1/2” (12.7mm) double fluted carbide router bit.

Set the router flat against straight edge. Lubricate with cornstarch to minimize friction between router base and straight edge. Move router with even feed speed. Allow router sound to indicate the rate of feed.

After routing edges, dry fit to assure a flat, true edge. In the dry fit process, the seam should virtually disappear. If the seam is not done correctly, redo by taking off an additional 1/16” (1.5mm). Check by dry-fitting again.

After routing, check again for a quality dry fit. Only after you have achieved a good dry fit should you proceed.
Seam Preparation

With 100 grit sand paper on a hardwood block, lightly score the edges to be seamed together. This step aids the adhesion between the two surfaces. Make one or two passes only. Be careful not to sand the top edge.

MIRROR CUTTING

Mirror cutting is a method of machining seams which cuts both edges to be seamed at the same time. Use only a 1/2" (12.7mm) shank double fluted bit. Place the two pieces to be seamed 1/4" (6.3mm) apart and secure them firmly to prevent movement. Clamp your straight edge to one side. The router must be fed through with a continuous movement without stopping. The two pieces will fit together exactly.

WAVY BIT SYSTEM

Another way to machine seams is to use the Wavy Edge Router Base and Bit to make two interlocking surfaces that fit snugly together. The seam edges align perfectly and do not slip, and a wavy surface seam is stronger because it has more adhesive area allowing better bonding. Here’s how: rout one seam edge with one side of the stepped Router Base, then rotate the router 180 degrees and rout the other seaming surface. Use a high-grade carbide bit with a reversible insert blade to cut the wavy seam. Inserts eliminate re-sharpening and ensure the accuracy of every cut. You save time preparing the seams, and the automatic alignment means you will not do as much sanding to get a professional finish.
Joining

AVONITE® Ultra-Bond Adhesive

Our adhesive is a pre-measured and pre-tinted two part adhesive. Ultra Bond hardens in approximately 40 minutes and is available in 250 ml cartridges. Ultra Bond is available in several colors and clear for excellent color matches. It is specially formulated to offer superior bond strength for all Avonite® products.

CARTRIDGES

Each cartridge contains 250 ml (10 oz.) of adhesive and will adhere 35 to 45 feet (12.1M) of 1/2” (12.7mm) seam. The adhesive flows through a static mixer tube and is ready for use. Two mixer tubes are included with each cartridge. To assure positive flow of activator, disperse a small quantity of adhesive before installing mixer tube.

REFER TO MACHINING SEAMS SECTION BEFORE APPLYING ADHESIVE

ADHESIVE STORAGE

It is recommended that Ultra Bond be stored in a refrigerator for extended life. Ultra Bond should be acclimated to at least 60°F or 15°C before being used. Store cartridges in an upright position as shown in photo. Storage at temperatures above 75°F or 24°C may affect the shelf life, and could adversely affect proper curing of the adhesive. All cartridges are dated with an expiration date. Do not use expired adhesive.

FINAL PREP

After the dry fit is complete and you are ready to join the seam, clean edges thoroughly with isopropyl alcohol. Place separation paper under seam area. Have seam blocks in place.

FABRICATION TIP

From time to time the bead of adhesive dispensed with the Avonite® Solid Surface Adhesive cartridge will not contain the prescribed amount of hardener. This may arise for a variety of reasons, but the end result is that small sections of the seam may not set up as rapidly as others. There are techniques that will reduce the variation in setup time. Once the bead of adhesive has been dispensed, a popsicle stick applicator may be used to spread the adhesive over the bonding surface. This serves to more uniformly blend the adhesive with the hardener and prevents variation in the hardening time of the adhesive. Another helpful technique used frequently is to dispense two thin beads as opposed to one thick bead. This method overlaps any possible gap in the hardener and prevents uneven hardening.
DISPENSING OPTIONS

Ultra Bond cartridges are designed to fit only in a 10 to 1 ratio system. Our systems are available in both manual and pneumatic styles.

Unique Properties

- The activator is opaque and viscous, much like a paste.
- The resin is similar to the viscosity of honey.
- The “clear” Avonite® Solid Surface Adhesive is “foggy” in appearance rather than “water clear.”

For a complete list of current adhesive colors, please see Tables A.2 and A.3 in this manual, or visit www.aristechsurfaces.com.

FABRICATION TIP

When a small amount is needed there is no reason to waste a mixing tube. Simply remove the end plug and squeeze the adhesive into a paper cup and stir for one minute.
CLAMPING METHODS

Before clamping seams, be sure to double check the following:

1. Surfaces to be bonded are properly scuffed with 100 grit sandpaper.
2. Separation paper is in place.
3. Pieces are properly aligned and level.
4. Edges are clean.

Prepare some reusable glue blocks made from scrap pieces of Avonite® material. They should be 1" (25.4mm) thick by 1 -1/2" (38mm) w x 2" (51mm). Bevel the edges and drill 1/4" (6.3mm) holes as shown in Figure 1 so the isopropyl alcohol will penetrate and release the hot melt bond when it is time to remove them.

On a standard countertop, hot melt 3 pairs of blocks about 6"(152mm) apart across the seam area (see Figure A). Bar clamps are then used to bring the joint together. Be sure the glue squeezes out to ensure a tight seam. However, avoid using excessive pressure which may cause too much glue to be squeezed out resulting in a weak joint.

After the seam has hardened, remove the blocks by applying isopropyl alcohol and allowing a few moments for the hot melt to soften. Also apply alcohol in the 1/4" (6.3mm) holes to allow for penetration of alcohol in the center of the block. Then place a chisel under the beveled edge of the block and gently pry; do not use excessive force. If the block does not free immediately, apply more alcohol and allow to soak for a while longer.

Other effective clamping methods use the Pinske Power Grips with brackets and turnbuckle, as shown in Figure B, or the Parallign Clamps shown in Figure C (Available through Monument Toolworks).

Other innovative devices designed by independent suppliers may save time or simplify difficult tasks. If there is any question regarding the use of such devices, please contact Avonite® Technical Services at +1 (800) 428-6648.
Finishing Seams

REMOVING THE FLASH LINE

Do not attempt to sand away the flash line with a belt sander. Instead, attach two skis to the base of a router. Use a flat bottom cutting bit and lower the cutter to just over the surface of the sheet. Cutting the flash line off this way eliminates sanding time.

SANDING SEAMS

The following procedure will efficiently finish seam areas. For illustration, please refer to Figure C.

1. Trim the Avonite® Solid Surface Adhesive flash line with router on skis or offset trim router.

2. The remainder of the flash line should first be sanded with 100 micron paper. It is important that sanding extend on either side of the seam, without concentrating directly on the seam, as illustrated by Point A. The 100 micron sanding should extend to about 6" (152mm) on either side of the flash line. Concentrated sanding could cause a valley, or dip, in the seam area.

3. The next step is to sand with 80 micron paper. The sanding area now extends to about 12" (305mm) on either side of the flash line, as shown in Point B.

4. Once the seam is sanded level, continue the standard finishing procedure by feathering out the finish in the seam area to blend with the final finish of the top, as shown in Point C.

Sanding should not concentrate directly on the flash line, but extend on either side to feather-in the finish.
**GENERAL REQUIREMENTS**

The construction of your edge build up is determined by the profile you wish to achieve. Strips are laminated together to acquire the bulk for the design. Confirm that your construction provides a minimum 1/2” (12.7mm) of bonding surface area after the profile is cut. Larger bonding surfaces create stronger edges. The diagrams below demonstrate construction methods referred to as Stacked Edges and Drop Edges. In general, Stacked Edges provide the greatest bonding surface area and therefore are the preferred method. Stacked Edges also allow layers to be put on one at a time. This ensures tighter joints and to offset the build ups at inside corners. Sand all surfaces to be glued with 100 grit paper sanding block to enhance the bond. **It is highly recommended that all edges have a minimum 1” (25.4mm) bonding surface.**

**Stacked Edges:** laminate strips together for the desired thickness. SAND BOTH SIDES of the strips with 100 grit. Laminate strips face to back.

**Drop Edges:** use a single strip turned vertically on edge. This is a common method but is the weakest construction method due to the minimum bonding surface area. This method is also limited to small round over or beveled profiles. Additional strips can be used to increase bulk and strength.

Any drop edges greater than 1-1/2” (38mm) tall require reinforcement. Figure C. shows a typical skirted front vanity. Note that the skirt is reinforced by plywood. The plywood substrate is also reinforced with brackets to prevent damage.

For added reinforcement we recommend gluing a 1/2” (12.7mm) x 1/2” (12.7mm) slice of solid surface behind the skirt edge joint.

V-Grooving edges is another form of drop edge. Although the bonding surface is somewhat increased, any v-groove edges over 1-1/2” (38mm) tall should be reinforced.
Clamping Edges

LAMINATING BUILD-UP DIRECTLY ON COUNTERTOPS

Edges should be straight and free of chatter-marks. Clean bottom of sheet and fascias with isopropyl alcohol. Light block sanding may be needed where edge is to be applied.

Dry fit and mark where they go with arrows.

Hot melt some guide blocks along the backside of the edge.

Glue and clamp one edge build up at a time to prevent glue from setting up before build up strips are applied.

Apply two small beads of adhesive to the surface.

Place the drop edge in the glue and make sure an even flash line develops.

Hold the drop edge back 1/8" (3mm) to avoid any chip out on seamed edge.

Place spring clamps 2" (51mm) to 3" (76mm) apart.

Keep clamps straight to avoid tilting the drop edge back. The tips of the clamps should be in the center of the drop edge.

After the Ultra Bond G has hardened, clamps may be removed. The edge can now be routed to your final configuration.
LISTEN TO YOUR TOOLS

By using a high quality router and reasonable feed speed, detailed cuts can be easily achieved. Keep the router steady and make a smooth pass without stressing the motor as this can cause chatter and more labor time. Heavier cuts, such as those for a 3" (76mm) bull nose can be produced by laminating several pieces together and machining in two steps.

For Best Results...

Use a 1/2" (12.7mm) shank profile cutter.

Sharp cutters require less sanding.

COMMON CONSTRUCTION METHODS FOR POPULAR EDGE PROFILES
FINISHING

The final finish of your application must be specified and understood by the end user. Most customers choose the Satin or Polished finish.

All Avonite® sheets come from the factory with minor linear sanding lines. These lines are 60 micron or a 280 grit finish on the face. To obtain any of the possible finishes these sanding lines must be removed. This is accomplished by starting the sanding process with 60 micron.

Using a 6” (152mm) or 8” (203mm) random orbital sander will reduce your sanding time by HALF over conventional vibrating sanders and will achieve a more uniform finish.

Sanding Process

1. Move the sander in a back and forth direction. NOT CIRCULAR.

2. Overlap each pass by 50%.

3. Sand at a slow and even pace, approximately 1” (25.4mm) per second.

4. Keep micron paper clean from sanding dust. This is easily done by putting the sanding pad on a piece of carpet while running and hold it down for a few seconds (check paper frequently).

*Each sheet of micron paper will sand 10 sq. ft (about 1 sq. M) of Avonite® material.
Sanding and Polishing

Matte Finish

After removing the linear sanding lines with 60 micron paper, place a Scotch-Brite® pad (#7447 Red) under the sanding pad to even out the finish. The matte finish is easily maintained and is usually the most suitable for lighter colors. Make sure the customer understands the required maintenance for the finish they have chosen. **Most solid surface samples are Satin finished and likely will be what the customer is expecting.**

Satin Finish

Sand with 60 micron paper, repeat sanding process with 30 micron paper. Place Scotch-Brite® pad (#7448 light gray) under sanding pad. Sand with Scotch-Brite® #7448 and soapy water. Homeowners may maintain this finish using a white Scotch-Brite® and Soft-Scrub.*

Polished Finish

After sanding with 60 micron paper, repeat the sanding process with 30 micron paper. Use a 3M Super Buff adapter to prevent the arbor of the polisher from damaging the surface. Dark colors with a high gloss finish show wear very quickly. A dark color is not recommended for heavy use areas.

Coppermine K3-8490 and Goldmine K3-8495 are dark colors that may require polishing for full impact. The brilliance of the shine comes from the fact that these products use real nonferrous metal in the ingot. The nonferrous metal will:

1. Have no effect on your tooling.
2. Cause some oxidation during polishing, as exemplified by blackening of the polishing pads. This is normal for polishing metals.

Finishing Guidelines

You should become familiar with the different colors and options you present to your clients. Most customers are expecting the gloss level they have on the sample they are choosing from. Download and print our Finishing Guidelines document. Go over these guidelines with your customers to help manage expectations.

The buffer should be variable speed between 1000-3000 RPM. Best results are achieved at lower speeds.
Sanding and Polishing * Paste

Step One

The first step of the polishing process uses 3M’s Marine Paste Compound (White) #06039 with 3M’s Super Duty2 + 2 pads (White). The Marine Paste Compound will remove 30 micron sanding swirls. It may be necessary to repeat this step to remove all 30 micron swirls. Apply enough pressure to deflect the pad as shown.

Step Two

Remove any compound residue by reversing the white pad. DO NOT mix the compounds on the same pad. Repeat polishing the surface with 3M’s Finishing Material #81235 (Quart) with 3M’s Super Buff Polishing Pad (Yellow). This will remove the swirl marks left by Step One and will produce a high gloss. Step Two takes about half the time as Step One. Reverse the yellow pad for final clean up.

Note: Keep the polisher moving to prevent overheating, and assure that the buffing pad does not dry out.

A matte finish is not recommended for dark colors, a satin finish provides a more even appearance.
Sanding and Polishing * Dry Cut

POLISHING WITH THE AVONITE® DRY-CUT SYSTEM

Another effective polishing method involves the use of the Avonite® Dry-Cut Finishing System abrasive bars. This is a three step system that quickly and easily removes sanding scratches. Since the compound is a solid it can be cleaner to use than 3M Marine Paste. Apply sparingly to the buffing wheel and it stays there to efficiently create a high luster finish.

Step 1: (Brown Bar)

The first step in polishing with the Avonite® Dry-Cut Finishing System is to use the brown bar (SM4036-A) with a 3M Super Duty 2+2 pad (white). Start with the Avonite® material sanded to a 30-micron finish. The brown bar must be applied directly to the buffing pad. With the buffing pad turned up and buffer running, press the bar firmly against the pad allowing it to buildup on the pad. Begin buffing the material, and be sure to apply enough pressure to deflect the pad as shown on page 2.14. Add material to the buffing pad if you feel you need more to ensure you do not build up excessive heat by using a dry pad. Repeat Step 1 as necessary to remove all of the 30-micron swirls.

Step 2: (Purple Stick)

This step will remove any marks left by the more aggressive cutting brown bar. Reverse the white pad and apply the purple stick compound (SM4036-B) to the pad. The purple stick must be applied directly to the buffing pad. With the buffing pad turned up and buffer running, press the stick firmly against the pad allowing it to build up on the pad. Add material to the buffing pad as you feel is needed to ensure you do not build up excessive heat by using a dry pad. Repeat Step 2 as necessary until you have removed the buffing swirls resulting from Step 1. To achieve a high gloss finish, complete Step 3.

Step 3:

This is the final step in achieving a high gloss finish. Remove any residue from the previous steps by buffing lightly with a clean 3M Super Duty 2+2 pad (white). Use at the lowest power setting, gliding across the material until all the material from Step 2 is removed. Repeat polishing the surface with 3M’s Finesse-it Finishing Material (#81235) with 3M’s Super Buff Polishing Pad (yellow) at the lowest power setting. This step will remove any swirl marks that may have resulted from Step 2 and produce a high gloss finish. Reverse the yellow pad for final clean up.

WET VS. DRY

We have found this polishing method to give equivalent results to the Finesse-It system, however the Finesse-It system is a little more forgiving and it is easier to control surface temperature. The Avonite® Dry-Cut Finishing System will give you a good polish if you are experienced and you will save some cleanup time.
Finishing Guidelines

Avonite® Color And Finishing Guidelines

Avonite® offers a wide range of unique products that are used in many different applications. Some of these products may not be suitable for high traffic applications due to their unique characteristics, dark hues, and saturated color. The color and finish guide below is intended as a general recommendation.

<table>
<thead>
<tr>
<th>Color</th>
<th>Kitchens</th>
<th>Bathrooms</th>
<th>Bars &amp; Furniture</th>
<th>Service Counters</th>
<th>Vertical Surfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midnight Sky</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Night Pearl</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Dark Roast</td>
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<td>●</td>
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<td>●</td>
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<tr>
<td>Star Shine</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
</tr>
<tr>
<td>Bronze</td>
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<td>●</td>
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<td>●</td>
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<tr>
<td>Cobalt Glass</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Copper Canyon</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Choosing the Right Finish

The design flexibility of solid surface offers us limitless options for style. With so many choices it makes it difficult to choose sometimes. One of the most confusing issues is the subject of finishing. Most manufacturers present 3 options commonly referred to as matte, satin, or gloss and ask the end user or designer to choose one of these. Quite often the contractor’s quote assumes the least expensive matte finish as the default unless otherwise noted.

If the finish options are not discussed, most of the time customers are expecting to get the finish on the sample they are looking at when they choose the color. Managing the customer’s expectations for finishing choices and overall performance is critical.

Choosing the right finish requires consideration of the color, texture, and application. Where it may be easier for a manufacturer or contractor to advise against a polished finish in a kitchen because of the concern for maintenance, it should not be the polished surface that causes concern but rather the color choice. Here is an example. Let’s compare two color options both from the Avonite® 100% acrylic solid surface product line for an average kitchen countertop: Casablanca (a light neutral tan) and Dark Roast (a deep and rich brown).

CASABLANCA
F1-9137

DARK ROAST
F1-7735
Finishing Guidelines

The light and neutral Casablanca will not easily show signs of everyday wear but the Dark Roast may show early signs of wear simply because of its color. This scenario would be true regardless of the finish chosen. A polished Casablanca countertop can go years without showing any wear.

Finishing Dark Colors

This is a good time to discuss what finishes are appropriate for dark and rich colors like Dark Roast. There are some of these colors in everyone’s sample box. When it comes to extra dark colors like these, the “matte” finish is a very poor choice. Rough matte finishes on dark colors leave surfaces looking chalky and they easily smudge with fingerprints. All dark colors should have a minimum “satin” finish. Manufacturers put a minimum satin finish on the samples in their sample boxes because all of the colors look much better and cleaner.

Maintenance

Now let’s consider the question of long term maintenance for different colors and finishes. Regardless of which finish was originally chosen, similar finishing steps must be applied to restore the surface to its original finish. There are two steps for a matte, three for a satin, and four steps for a high gloss. Because of the specialty equipment used to achieve a high gloss, end users wanting a polished finish must be prepared to acquire this equipment and technique or contract their installer to refinish their surfaces periodically every 4 or 5 years depending on the application. In most cases, countertops that are used and cleaned everyday develop their own level of “patina”. Matte surfaces become more reflective with use. It is generally agreed that the satin finish offers end users the best look with the minimum required maintenance. However maintaining a polished surface is only one more step than a satin finish. Overall hardness and scratch resistance of all solid surfaces are relatively the same. Anything that is harder than the surface has the potential to scratch. Items such as ceramic jars or stoneware for example should have felt protectors on the bottom to prevent scratching.

Texture

Texture refers to how much pattern you see in the color. Saturated colors with little texture will show wear easier than full textured colors. Compare these two colors illustrated below. These are two very popular black colors from the Studio Collection®. Notice the texture or pattern of the Black Ice versus very little pattern in the Midnight Sky. The extra texture in Black Ice will not show wear as easily as Midnight Sky or other saturated colors.

Special Exceptions

Some products in the Studio Collection® create a few exceptions to these general finish guidelines. Many of these products contain minimum levels of ATH filler. This allows the products to have a clear matrix that does not show wear as easily as highly filled products. It is also this clear matrix that gives these products their depth and unparalleled beauty compared to all other products. This depth and clarity is enhanced by the polished finish. The combination of a clear matrix and a full texture like Black Ice create a very durable polished surface.
The Symphony Collection has characteristics that require some specific fabrication considerations. The random directional veining ranges from subtle to bold, so every sheet will be unique. The edge of the sheet can have a different appearance than the top of the sheet, and therefore should have consideration given to the desired edge effect. As a result of the random patterns in the sheets, sheet yields may be lower than standard patterns, therefore it is important to consider these characteristics when quoting jobs and setting the expectations of the customers. Larger samples and full sheet images help customers to visualize the final results.

**Stacked Edges**
Stacking edges reveals several layers and color differences through the thickness of the sheet. The variations are apparent and may cause objection from the customers.

**Drop Edge**
The drop edge reveals one edge of the sheet thickness contrasted with the top surface. In some cases this contrast in pattern can be minimized with edge profiles such as an ogee or bevel.

**V-Groove**
Creating edges with a v-groove method produces an edge build that simply folds the top pattern over the side. The continuation of the top side pattern eliminates any pattern changes and is most preferred by customers.

Symphony colors have large scale patterns that require some extra considerations. Design and price Symphony products with directionality in mind. Not all fabrication methods are suitable; those that work with subtle patterns may not work with bolder patterns. It is important to understand these characteristics and be able to set customer expectations.
Installation

3.1

It is very important that the personnel installing the Avonite® material be properly trained and follow the recommended procedures. Improper installation may lead to problems in the future. Failure to follow the recommended procedures will void the warranty.

Substrates

Choosing the appropriate substrate for different applications should be considered. A solid substrate cannot be used when heat sources are present, as in kitchen applications. The following methods demonstrate alternatives to solid substrates.

Runner Method

The runner method uses 1" x 4" (25.4mm x 101mm) supports that run parallel to the length of the top as shown in Figure A. They are at the front, center, and rear edge of the counter top, adhered with dabs of silicone every 18"-24" (45.7cm - 61cm). The cabinets must have cross supports for the runners every 18"-24" (45.7cm - 61cm).

Clearances

Be sure to leave 1/16" (1.5mm) - 1/8" (3mm) between the edge of the substrate and the back of the build up. Leave a minimum 1/16" (1.5mm) between the counter top and the back wall. For wall to wall installations, allow clearance on each end for expansion. Leave a 1/8" (3mm) gap for Class I products and 3/16" (4.7mm) for Class III products. Allow as much clearance as possible at cook tops and drop-in sinks.

Adhering Material to Substrates

Dabs of silicone are placed in the front, center, and rear every 18"-24" (45.7cm - 61cm) for all substrates. A dab of silicone should be the size of your thumb nail.

Securing Top to Cabinets

We recommend attaching the substrate to the Avonite® top first and then fastening it to the cabinets. This way if you ever need to remove the top, you may do so without destroying it. Set tops on pre-leveled cabinets. Put screws from all corner blocks on cabinets into the substrate. Make sure screws do not go all the way through substrates and into the countertop. If screws are allowed to contact the solid surface, they may start a crack at that point. We recommend 100% silicone for bonding to wooden substrates. NEVER USE LIQUID NAILS™ or other rigid adhesive which does not allow for expansion or contraction of the top.
**Installation 3.2**

**ALL CUT OUTS SHOULD BE MADE WITH A TEMPLATE AND A ROUTER AND HAVE A MINIMUM 1/4" (6mm) INSIDE CORNER RADIUS.**

Corners of cook top cut outs must be reinforced by bonding a 3" (76mm) x 3" (76mm) or larger piece of Avonite® material to the underside.

Using the runner method substrate as pictured allows for venting of heat.

**COOKTOP AND BACKSPLASH CLEARANCE**

Due to excessive heat generated from cook tops and pans being heated, minimum clearances are required by Avonite® material.

Standard 4" (102mm) tall splashes should have a minimum clearance of 2" (51mm) between the splash and the cook top flange.

**Note to homeowner:**

Full height splashes within 2-1/2" (63.5mm) from the cook top flange will not be covered under Avonite® 10-Year Warranty. Extensive use of large oversized pans that overhang the counter should be avoided.

Commercial type cook tops for residential use need to be supported inside cabinet base, so that cook top is not supported by countertop alone.

**THERMO-FLOW TAPE**

The use of Avonite® Thermo-Flow tape is REQUIRED for prevention of damage in cook top cut outs and slide-in ranges due to excessive heat. The use of any other tape voids the Avonite® 10-Year Warranty. Thermo-Flow is a 2-1/2" (63.5mm) wide heat conductive aluminum tape with a glass backing that adds insulating properties. Install one layer of Thermo-Flow around the cut out as shown in Figure A.

**Commercial Food Service Hot Well Limitations**

Aristech Surfaces LLC does not warrant the use of Class III products for use in commercial hot well unit applications. This restriction will continue in effect until appropriate design criteria have been developed. We will keep you advised of any future developments in this area. Guidelines for installation of commercial hot wells are given on page 3.4.
Making Field Seams

To insure that drop edges are properly aligned after seaming, stop routing the profile a couple of inches from the seam on either side. After removing the flash line of the seam you may then route the profile across the seam.

INSTALLATION CHECK LIST

1. Before Seaming
   a. Good dry fit (no gaps)
   b. Seam block in place
   c. Separation paper
   d. Proper clearances
   e. Clean with isopropyl alcohol
   f. Prepared for clamping

2. Support all seams

3. Substrate secured to cabinets

4. Level cabinets 3/32" in 48" (2.38mm in 120cm)

5. Cutouts—1/4" (6.3mm) radius

6. Thermo-Flow tape on cook top cutout

7. Inside corner radius

8. Silicone

OVERHANGS

When installing overhanging countertops, support is required for 1/2" (12.7mm) thick overhangs extending more than 6" (152mm). Support is provided by plywood underlayment and brackets which are equilateral right triangles (anchor leg is equal in length to the support leg). Brackets, when required, are placed no more than 24" (60.9cm) apart and should come to within 5" (127mm) of the countertop edge. Refer to the dimensions below for the type of support to use.

OVERHANG SUPPORTS

Up to 6" (15.2cm) require no additional support.
6" - 12" (15.2cm—30cm) require 3/4" (19mm) plywood substrate or brackets
12" - 18" (30cm—45.7cm) require brackets or metal frame
Overhangs more than 18" (45.7cm) should be engineered to no more than 1/8" (3mm) deflection.
COMMERCIAL FOOD SERVICE AREAS

The following features must be included in a commercial food service installation in order to be covered by Avonite® 10-Year Limited Warranty. Color must be selected from among Avonite® Class I fire rated products.

1. Cabinet must be even and level with no protrusions to cause cracking.

2. Support tops every 18” (45.7cm). Cantilevers over 6” (15.2cm) require structural support. Provide support within 3” (7.6cm) of all cut outs.

3. Hot and cold units must be supported from below and not rest on the Avonite® top.

4. Attach Avonite® to support frame with dabs of silicone every 18”-24” (45.7-61cm); do not use a continuous bead.

5. Separate tops containing hot sections from those with cold sections. A soft (silicone) seam may be used.

6. Make cut outs with router and template and allow a 1/2” (12.7mm) radius in the corners. Cut and sand a 1/8” (3mm) round over on top and bottom edge of cut out.

7. Reinforce corners of rectangular cut outs with 6” x 6” (15.2 x 15.2cm) blocks of Avonite®. Circular cut outs must have a continuous ring of Avonite® 2” (5cm) wide as reinforcement.

8. Use a layer of Thermo-Flow tape to line the perimeter of all hot and cold cut outs.

9. Hot well units must be covered with a layer of FlexSulation blended PVC foam sheeting. The foam may be attached to the hot well with 3M® double sided aircraft tape, or duct tape. McMaster Carr Supply 562-692-5911 Part # 9349K1

10. Cabinets are to be ventilated by installing a fan near the bottom to pull cool air into the cabinet and by providing vent slots near the upper edge of the cabinet to expel the hot air. Temperatures in the cabinet must not exceed 170°F (78°C).

11. Sneeze guards must be fastened to the cabinets or the floor, not directly to the Avonite® sheet. Holes in the Avonite® sheet to accommodate the sneeze guard supports must be cut 1/4” (6mm) oversize in diameter to allow for expansion and contraction.

12. Deck seams must be reinforced with a 4” (10cm) seam block. Keep seams 3” (7.6cm) or more away from cutouts.
**Base Installation**

Please read the instructions carefully prior to installing the base. These are the basic instructions for the installation of a shower base in a step-by-step sequence that will work in most types of installations. If you have an installation that is not covered here, please call Avonite® Technical Services for additional information +1 (800) 428-6648.

**Warning**—Please inspect the shower base for breakage and report any damage to your Avonite® representative. Allow the shower base to acclimate to room temperature before installing.

<table>
<thead>
<tr>
<th>Tools and Supplies Needed for Installation</th>
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</thead>
<tbody>
<tr>
<td>• Level</td>
</tr>
<tr>
<td>• Silicone/Plumber’s Putty</td>
</tr>
<tr>
<td>• Thin-Set Mortar &amp; Water</td>
</tr>
<tr>
<td>• Shims</td>
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<tr>
<td>• Wrench</td>
</tr>
<tr>
<td>• 1/4” - 1/2” (6mm—12.7mm) Grooved Trowel</td>
</tr>
<tr>
<td>• Cast Brass Shower Drain</td>
</tr>
<tr>
<td>• 5-gallon Empty Bucket</td>
</tr>
<tr>
<td>• Tool for Mixing Thin-Set Mortar</td>
</tr>
</tbody>
</table>

**Preparing the Installation Site**

• Open shower base and inspect the product for any damage.

• Clean and scrape the floor of the shower base alcove. This space must be free of any debris in order to get a proper adhesion with the thin-set mortar.

• Measure the size of the alcove to insure that the base and panels fit properly.

• Trial fit the base in the alcove and make sure that the drain location lines up properly with the shower base.

In a three wall application, the base should slide in easily with approximately 1/16” - 1/8” (1.5mm—3mm) spacing between the studs and the base. Placing a level on the base, check that the base sits level on the floor. Lean the base back or remove from the alcove.

**Installing the Base**

• Install the cast brass shower drain into the shower base. Follow the installation instructions that came with the drain. Plumber’s putty or silicone are acceptable to use with the drain.

• Mix and apply thin-set mortar to the floor, using the notched trowel. Spread the mixture to achieve a depth necessary to fill the voids in the floor and enable the base to sit level. A 50 lb. (22.6kg) bag of thin-set should provide at least 45-50 sq. ft. (13.7—15.2 M²) of coverage. All supporting points should have contact with the thin-set mortar.

• After applying the thin-set, the base into place. Make sure the base is resting level on the thin-set.

• Clean the area at the threshold of any excess thin-set. Allow the thin-set and shower pan to cure for **24 hours** before working in the pan area. Be sure to protect the base floor after installation, using card board sheeting or a like material, until the complete project is finished.

• Before proceeding to install the wall system, flood test the shower base for proper drainage.
Wet Wall Panel System Installation

Wet Wall Panels and Accessories

Please read the instructions carefully prior to installing the wall system. This document will give you basic instructions for the installation of wet wall panels in a step-by-step sequence that will work in most types of installations. If you have an installation that is not covered, please call Avonite® Technical Services with any questions +1 (800) 428-6648.

Warning—Please inspect all items and report any damage. Store panels in a flat area to avoid warping until the time of installation. Allow panels to acclimate to room temperature before installing.

### Recommended Tools and Supplies for Installation

| • Circular Saw with Carbide Tip Blade (24-40 tooth) | • Level |
| • Random Orbital Sander | • Square |
| • Belt Sander w/80 Grit Belt | • Jig Saw with Wood Finish Blade |
| • 150-320 Grit Sandpaper & Scotch Brite Pad | • Compass or Scribe Tool |
| • Installation Kit or Hot Melt Gun & Glue Sticks | • Denatured Alcohol |
| • Drill, Hole Saw, 1/2” (12.7mm) Diameter Bit (Sharp) | • Clean Shop Rags |
| • Caulk Gun & Silicone | • 1” x 4” x 8” (25mm x 10cm x 203mm) Wood for Bracing (4 pcs.) |
| • Paintable Latex Caulk | |

Preparing the Site

- Prepare the area with moisture resistant dry wall or tile backer board. Never install directly on any masonry wall or construction that is, or may become, damp.

- When installing over ceramic tile, check for loose tiles. If you find any, correct the problem. Make sure that the area to be covered is uniform in support. If not, build up the areas without tile. Remove the bottom row of tile and cut a ventilation gap in the substrate.

- On every installation, make sure that there is a 1/2”-1” (12.7mm—25.4mm) (Detail A) clearance between the top of the shower base or tub deck and the bottom of the moisture resistant substrate. This will allow for ventilation and keep water leaks from wicking up the substrate. (Figure 1)

Preparation for Accessories

Recessed Accessories

Make sure the accessories will fit near, but not in, a stud and closer to the center of the sheet. Make sure no electrical wiring or plumbing is present before cutting out for the accessories. Make the cutout in the substrate to receive the accessory.

Surface Mounted Accessories

If a surface mounted accessory, such as a grab bar, is going to be installed, make sure 2” x 6” (50.8mm x 152.4mm) wood blocking is installed behind the substrate where the surface mounted accessory will be located. This will insure that there is solid backing for any screws that need to be used in the installation. (For blocking requirements see the...
Measuring for Installation

1. Determine your desired wall panel height. Allow for a 1/16” (1.5mm) gap between the solid surface panel and shower/tub base pan for a better silicone seal (Detail B).

2. Solid surface panels should be installed in the following order: Back wall, Side wall without plumbing, and then the plumbing wall.

3. You may need to draw level and plumb lines on the wall to determine whether your shower bases or walls are out of square. Using the reference line and measuring from the lowest point on base or widest point on the wall, determine how your panels will need to be cut. Transfer this data to the panels. (Figure 1)

4. Check your measurements and cut the panels with a circular saw or jig saw. You may make final adjustments to your cuts with a belt sander.

Measuring and Making Cutouts

1. All inside corners of cutouts should have a minimum 1/4” (6mm) radius. Do not cut sharp inside corners.

2. Locate the location of the plumbing holes. Transfer the data to the panels. Cut the holes a minimum 1/4” (6mm) larger than the pipe diameters. The cover plates for the plumbing fixtures may allow for more variance. Consult the plumbing fixture installation instructions for templates and recommended hole cut out sizes. Check your measurements and using a jig saw or standard bimetal hole saw, cut out the plumbing holes.

3. Once the panels are cut to size, locate the caddie cutouts, marking the cut out locations. Cut the caddies out after the panels have been installed.
Mounting the Panels (Figure 2)

1. **Shim**: Place shims 1/16” (1.5mm) thick) at the base of where the sheets will rest. This allows for better flow of the silicone. Laminate chips make great shims. (Shims may not be necessary if the slope of the shower base creates a natural adhesion gap.)

2. **Trial Fit & Scribe the Panels As Needed**: Place the panel on the shims where it will be installed and check the fit. If necessary, scribe the panel for a better fit. Trim the scribe with a belt sander.

3. **Clean the Sheets and Installation Area**: With denatured alcohol and a clean rag, clean the back of the sheets and the substrate, along with any other area that will be in contact with the silicone.

4. **If using an installation kit**, prior to applying the silicone adhesive, apply the butyl tape about 2” (50.8mm) from the edge, around the perimeter of the panel.

5. **Apply the silicone adhesive**, about 1” (25.4mm) from the edge, around the perimeter of the panel. Place quarter sized dots of silicone adhesive every 8” - 10” (20.3cm—25.4cm) apart over the surface of the panel. If Accessories are being used, on the wall, place a bead of silicone around the cut out location.

6. **Place the panel on the 1/16” (1.5mm) shims**, line up any holes, and firmly press the panel in place.

7. **If using a hot melt glue gun**, apply the silicone as stated in steps 4 & 5, apply hot melt along the back edge of the panel where it will be attached to the substrate and press the panel firmly into place. The hot melt will hold the panel until the silicone sets up.

8. If you find the panel pulling from the wall, bracing may be necessary. Use 1’ x 4’ (.3m x 1.2m) boards, or other dimensional lumber, and brace the panels where needed as illustrated. (Figure 3)

9. Allow the silicone to cure. Make all remaining cut outs. Silicone between the panel and the substrate along the cut out edge and install the accessory.
11. Once the silicone is set up and the panel is secure, install the optional components.

12. Install any surface mounted items, such as grab bars, shower seats, etc, make sure that the screw hole drilled into the panel is 1/16” (1.5mm) larger than the screw so that the accessory is held in place by the wood blocking and not the panel. If the accessory is to be ADA compliant, please refer to the ADA guidelines for the proper heights and locations.

Confirm the light with the architect.

Installing Optional Trim

- Trim should be installed using silicone adhesive. Hot melt glue should be used to tack the trim in place while silicone cures. Clean all joints with denatured alcohol before applying silicone.

- Caulk all inside joints with the color matched silicone.

- Caulk outside joints with paintable caulk where wall surfaces are painted, or silicone if wall surfaces are unpainted.

- Clean up silicone with denatured alcohol while silicone is still wet.
**Surface Mounted Shelf Accessory**

These instructions apply to the shelf accessories that are designed to rest flush against the corner of two wall panels and not recessed within a wall panel.

1. For ease of installation, clean the mounting area of the panels with denatured alcohol.

2. Use the level and mark on each panel where the shelf unit should be placed. Hot melt or tape two indexing blocks (small pieces of wood or solid surface) where the shelf unit will be mounted, using the marks from above. These blocks will ensure that the mounting is level and will hold the unit in place until the silicone adhesive dries.

3. Apply silicone to the sides of the accessory that will be in contact with the wall panels. Leave several spots between the silicone on the accessory to apply hot glue or tape.

4. Apply small amounts of hot melt or tape to the accessory in several places and immediately press the accessory into the wall panels, making sure that it is straight and flush against the wall panels and index blocks.

5. Hold the accessory in place for 30 seconds or until the hot melt has cured. The hot melt should hold the accessory in place until the silicone cures. Remove any excess silicone around the shelf accessory before it dries.

5. Once the accessory is securely in place, the index blocks can be removed if desired. Apply silicone to all edges of the accessory that contact the wall panels. Let silicone cure for 24 hours in the dry environment before resting objects on the shelf accessory.

*Note: Never try to screw into the wall panel.*

**Recessed Shelf Accessory**

These instructions apply to the shelf accessories that are designed to be recessed within a wall panel.

1. Make sure no electrical wiring or plumbing is present before cutting out the location for the accessory.

2. Measure, level, and mark the panel for the location of the accessory. Place the accessory against the wall panel and trace the outline of the back of the accessory unit against the wall panel.

3. Use the drill and hole saw to drill a hole inside the outline for the accessory item, to be used as starting point for the jig saw to cut the opening. Use a jig saw with a fine to medium tooth blade to cut the opening for the accessory.

4. Dry fit the accessory to ensure a proper fit. The shelf accessory should fit tightly within the opening. If the accessory does not fit, repeat Step 4 until the proper fit is achieved.

5. Clean the mounting area of the panels and shelf accessory with denatured alcohol.

6. Apply silicone to the sides of the accessory that will be in contact with the shower panels.

7. Press the accessory into the opening, making sure that it is flush against the wall panel. Clean any excess silicone from the wall panel or shelf accessory before the silicone dries.

8. Once the accessory is securely in place, apply silicone to all edges of the accessory that contact the wall panel. Let silicone cure for 24 hours in dry environment before resting objects on the shelf accessory.
GENERAL SINK FUSED MOUNTING INSTRUCTIONS

Positioning and Preparation
Sinks are recommended for bonding to 1/2” (12 mm) Avonite® sheet thickness. Turn the sheet back-side up on a well supported surface. Position the bowl on the sheet (Figure 1). Do not nick or scuff the rim of the bowl. With a nail or screwdriver, etc., scratch a line on the sheet around the perimeter of the bowl. Drill a 1-1/4” (31.4mm) pilot hole, with a hole saw, in the sheet in line with the drain of the bowl (Figure 1). With a flat sanding block and #80 grit sandpaper, sand the underside of the sheet where the bowl is to be bonded. This removes factory sanding lines or scuff marks. With a flat sanding block, scuff sand with #80 grit sandpaper the top flange of the bowl. Do not round over or nick the rim (Figure 2). Mark the location of 4 locating blocks as shown in Figure 3. These blocks can be scrap pieces of material 1” x 1-1/2” x 1/2” (25mm x 38mm x 12.7mm) thick. Fasten the blocks to the back of the sheet using Locktite 495, or equivalent. This will keep the sink from sliding during bonding.

Bonding
Remove the bowl and clean the bonding area and the bowl with isopropyl alcohol and let it dry. Apply the Ultra-Bond G to the sheet fully coating the flange area. Always use adhesive to match the bowl or sink. Use all-thread, two blocks of plywood and a wing nut to clamp the bowl to the sheet as in Figure 4. Tighten the clamp until the adhesive flashes out evenly and allow the adhesive to harden. Schock Sink colors available are White, Crème, and Ivory.

Use the following Ultra-Bond G colors:
- White = Polar
- Crème = Crystal
- Ivory = Crystal

Mounting Brackets
Mounting brackets may be used to under mount sinks other than Avonite® sinks. Drill a 1/4” (6mm) diameter hole by 1/2” (12.7mm) deep, 3/4” (19mm) from the sink into the locating blocks as shown in Figure 3. These blocks can be scrap pieces of material 1” x 1-1/2” x 1/2” (25mm x 38mm x 12.7mm) thick. Fasten the blocks to the back of the sheet using Locktite 495, or equivalent. This will keep the sink from sliding during bonding.

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Shaping The Edge

Turn the top over and use the specially designed bowl router bits to shape either a flush or bull nose bowl edge trim. Cut the sheet material from the center of the bowl area with the special straight router bit with an over sized nylon bearing. Start from the pilot hole and rout clockwise around the bowl. Hold the cutout steady as it separates from the top to avoid damage to the edge (Figure 6). A bull nose trim on the edge (Figure 8 and 10) of the sheet creates a shadow which can help hide seams. The cutter slightly shaves the bowl edge and removes all the seam compound. A round over bit on the edge (Figure 7 and 9) of the sheet will produce a smooth edge. The cutter slightly shaves the bowl edge and removes all the adhesive. Different sheet thickness and cutter heights can produce various edge profiles.

NOTE: The bowl bits shown have a 2 1/2" (64mm) cutting diameter. Router base adjustments may be needed.

For additional information contact Avonite® Technical Services +1 (800) 428-6648.

NOTE: WHEN POURING BOILING WATER INTO THE SINK OR USING AN INSTANT HOT WATER DISPENSER, COLD WATER SHOULD BE RUNNING INTO THE SINK SIMULTANEOUSLY. THIS WILL ELIMINATE ANY POTENTIAL THERMAL SHOCK CRACK. THE USE OF A GARBAGE DISPOSAL LARGER THAN 3/4 HP IS NOT COVERED UNDER AVONITE® WARRANTY.

Kitchen Sink Rounding Over Bit—Velepec 30-155
CRST10-8-8VTR  1/2” (12.7mm) Radius for 1/2” (12.7mm) thick top

Vanity Sink Rounding Over Bit—Velepec 30-140
CRST20-8-BVT  1/2” (12.7mm) Radius for 1/2” (12.7mm) thick top
Color Matching Sheet to Bowl

Aristech Surfaces LLC makes every effort to achieve a visual color match between Avonite® 100% acrylic solid surface sheet products and bowls. However, we do not guarantee a color match between sheet and bowl of the same name. When you are given an order to supply a fused under mount sink in which the sink and the deck are the same color, there is a distinct possibility that there will be a visual color mismatch between the edge of the deck and the wall of the sink. The likely color mismatch problem is complicated by the fact that you cannot tell how closely the sink and sheet match until the two are joined and the edge of the deck is routed flush with the sink. We do have a method of mounting a bowl in the same color which will mask the color mismatch (See illustration on right). Using bit shown, sanding the seam area between the bowl and the sheet and putting the seam on the bottom side of the bull nose should hide most color match problems. If you have any questions regarding this procedure, please contact the Avonite® Technical Service Department at +1 (800) 428-6648.

NOTE: ARISTECH SURFACES LLC DOES NOT WARRANTY COLOR MATCH BETWEEN SAME COLOR AVONITE® 100% ACRYLIC SOLID SURFACE SHEET AND BOWL.
Patching

4.1

PATCH KITS ARE ONLY AVAILABLE FOR STUDIO COLLECTION® COLORS.

PRODUCTS NEEDED FOR PATCHING:

a. Patching Resin
b. Catalyst (sold separately)
c. Stirring Stick
d. Particulate Can
e. Two Shading Vials

Minimal damage — lightly rough out area to 3/16” (5mm) depth. You may need to rout out the area to hold patching material. Be sure to serrate edges of routed area to help blend in the patch. Clean area with isopropyl alcohol. Allow to dry completely. Mix particulate with patching resin in one large container. Stir mixtures thoroughly together. Compare color by placing a puddle of water next to the area to be patched. Add darker shading to darken, light particulate to lighten. The amount of catalyst to be added should be measured by the amount of resin used not the total volume of both containers. (see page 4.3) Area has been masked off to contain patch material. Patch material is difficult to bring to the same gloss as the sheet in a polished finish. A 100 watt light bulb to post heat the patch will help. Larger areas should be repaired with an insert of matching Avonite® material.

Patch kits are not to be used to repair a bad or broken seam, see page 5.4-5.5, REPAIRING SEAMS
Products Needed For Inlay:
Inlay Resin (same as Patching Resin)
Colorant—Sign paint*
Catalyst
Stirring Stick
Paper Cup

Route out slot for color inlay. It should be 1/8" (3mm) deep at a minimum. Contain over pour by placing masking tape or caulk around slot creating a dam about 1/8" (3mm) above the surface.

Add colorant to inlay resin, one drop per ounce. Add appropriate amount of catalyst and stir thoroughly. Pour mixture into prepared slot. Over pour by 1/8" (3mm) to eliminate low spots and air bubbles.

Allow to dry thoroughly and finish. The hardening time is approximately 8 hours.

METAL INLAYS—Glue the metal to the bottom of the groove with Super Glue. It may then be over poured with clear resin. Over pour should be a minimum 3/32"(2mm) deep.

Fabricator Notes:
Inlay Resin is available in quarts and 4 ounce cans. When making large inlays, color enough material to do the entire job. Custom colors will be difficult to match later.

Patch Kits are often used for decorative inlays. Particulate may also be special ordered in quart containers. Follow the same procedure above for inlay resin.

* Sign paint is a high pigment enamel paint such as Chromatic® or One Shot® usually found at art supply stores.
RATIO OF CATALYST DEPENDS ON TEMPERATURE

Ratio of Catalyst: Drops per one ounce of Patching/Inlay Resin.

EXAMPLE: Ten drops per one ounce of Patching/Inlay Resin.

Ambient temperature at 75°F (23.8°C).

Therefore: At an ambient temperature of 75°F (23.8°C)
4 ounces (113.4gm) of Patching/Inlay Resin would take 40 drops of catalyst.

Reduce Catalyst by one drop for every degree above 85°F. 5 drops per ounce minimum.

Add 2 drops of catalyst for every degree below 75°F. 20 drops per ounce maximum.

Material will not fuse correctly below 55°F.

Best working range between 75°F and 85°F.
INSTALLING SCREWS OR BOLTS IN AVONITE® PANELS
INTERIOR & EXTERIOR APPLICATIONS

Aristech Surfaces LLC realizes there are certain applications that need additional vertical support.

Examples: Avonite® outdoor signage, elevated wall cladding or ceilings etc., and other similar applications. The proper technique for installing screws or bolts through Avonite® sheets should be done according to Figure 1.

Soft seams should be used for exterior applications

Important facts that you need to remember are:

1. Hole should be 1/4” (6mm) oversize in diameter minimum (for interior applications).
2. Hole should be 1/2” (12.7mm) oversize in diameter (for exterior applications).
3. Rubber grommet/washer needs to be inserted in hole to provide cushion for movement during expansion or contraction.
4. Do not over tighten screen or bolt; snug tight only.

Outdoor Applications

Aristech Surfaces LLC does not warrant exterior applications. As with any other solid surface products, dark colors must not be located where they will receive direct sunlight. The sunlight will cause an extreme temperature increase due to dark colors’ heat absorption, accompanied by expansion of the material with potential distortion or cracking. A sign must not be located where it will be periodically sprayed with water as from a sprinkler system. Water spots will leave mineral deposits which will buildup on the surface, eventually making it difficult to restore to the original appearance. Three dimensional structures with hard seams are not suitable for outdoor applications in any color for any solid surface products. Stresses are created when the sun warms part of the structure while another part joined to it remains cool. Such stresses are likely to lead to failure of a seam or failure of the material itself.

Engraving and Sandblasting

Avonite® material can be engraved by conventional carbide engravers and laser engravers. Letters or logos are easily cut out by computer controlled routers. Avonite® material can be sandblasted using a monument stencil like anchor Continental #111 or “Buttercut” by 3M. Silicon carbide (80 grit) at 80 psi gives the best results for a sharp edge.
These Thermoforming Parameters are basic guidelines for fabricators to thermoform Avonite® material. The parameters listed below are recommendations, which are a direct result of actual forming of Avonite® material. This testing was conducted by the Avonite® Technical Service Department, but values are approximate. We suggest re-testing for varying conditions.

**Material Preparation**

When preparing material to be formed, it is recommended that material be cut to size. Then, remove all chips or gouges on the edge of the material. Any chip or gouge left on an edge may cause the material to tear during forming.

**Thermoforming Temperature**

Temperatures given here are approximate and represent a starting point to establish the conditions you need for your project. If material is too cool or too hot it may crack or tear while bending.

**Studio Collection**

When heating material for forming, it is important to uniformly heat the entire thickness of the sheet. Spot heating or surface heating is not adequate to form the sheet stock. To achieve this, it is recommended that an oven designed for solid surface be used. Be aware that heating in an oven may darken the color of light colored Avonite® material. Avonite® Glass and Petals Series products are very difficult to bend and are not recommended for thermoforming.

**Oven Options**

Below are thermoforming guidelines for conventional and platen style ovens. Every oven is unique and calibrations may be necessary. Be sure the oven used is large enough for the entire piece to be formed.

<table>
<thead>
<tr>
<th>Product Group</th>
<th>Temperature</th>
<th>Time/Minutes</th>
<th>Minimum Radius &quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avonite® 100% Acrylic</td>
<td>370 F / 187 C</td>
<td>20-25</td>
<td>6&quot;</td>
</tr>
<tr>
<td>Avonite® 100% Acrylic</td>
<td>370 F / 187 C</td>
<td>10 to 15</td>
<td>3&quot;</td>
</tr>
<tr>
<td>Studio Collection® C III</td>
<td>254 F /120 C</td>
<td>20-25</td>
<td>8&quot;</td>
</tr>
<tr>
<td>Studio Collection® C I</td>
<td>270 F / 132 C</td>
<td>20-25</td>
<td>14&quot;</td>
</tr>
<tr>
<td>Special Notice *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avonite® 100% Acrylic Recycled 13.5%</td>
<td>370 F / 187 C</td>
<td>20-25</td>
<td>14&quot;</td>
</tr>
</tbody>
</table>

**Conventional Oven**

**Platen Oven**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time/ Minutes</th>
<th>Minimum Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>302 F / 150 C</td>
<td>15</td>
<td>6&quot;</td>
</tr>
<tr>
<td>302 F / 150 C</td>
<td>8</td>
<td>3&quot;</td>
</tr>
<tr>
<td>212 F / 100 C</td>
<td>10 to 12</td>
<td>8&quot;</td>
</tr>
<tr>
<td>225 F / 110 C</td>
<td>10 to 12</td>
<td>14&quot;</td>
</tr>
<tr>
<td>302 F / 150 C</td>
<td>10 to 12</td>
<td>14&quot;</td>
</tr>
</tbody>
</table>

*Sharkskin F1-7556, Tango F1-7552, Hazelnut F1-7557, Canary F1-7554, Icecap F1-7555, Jungle F1-7553, Ginger F1-7551
Repairs

Most Common Reasons For Seam Failures

1. Excessive heat from belt sanding
2. Too much clamping pressure
3. Inadequate mixing of catalyst
4. Insufficient catalyst from cartridge if voids not purged by dispensing small quantity of Ultra Bond G before installing mixer tube
5. No seam block
6. Unsupported seams
7. Seams near heat source such as dishwasher or cook top
8. Seams placed at points of stress such as inside corners

Seam and Damage Repair

1. The damaged area must first be bonded back together. When the opening is wide enough, Ultra Bond G can be used. For tight cracks, a very thin cyano acrylate (Super Glue) could be used to fill the void.
2. After the glue has dried, route a groove about 1/4” (6mm) deep — See drawing
3. Glue a matching piece of Avonite® material into the groove. Always leave a piece of material on the job site for any future damage (perhaps on the floor beneath a bottom drawer or mounted in the sink cabinet).
4. Material may then be routed level and sanded back to the original finish.

![Diagram of seam and groove options](image.png)
Pie Shape Repairs

The pie shape repair has proven to be one of the best methods of repairing cracks and damaged areas. The principal is to create a template large enough to encompass the damaged area. Clamp on the template and rout out the area to be replaced.

Cut a matching wedge piece to fit using the same template and router. Check the dry fit and adjust until there are no gaps. Glue the repair piece(s) in place with a reinforcing block underneath whenever possible.

The methods and techniques have improved over the years and today there are several companies that offer repair templates and router bits that make repairs very quick and accurate.

Circle Template Repairs

The circle template repair is recommended for damages from heat producing appliances or hot pots that occur in the center of the counter.

Templates By Andreas offers a selection solid surface repair templates and tools. www.andreascustomdesign.com

Below is the 10 Degree Repair Kit available at www.specialtytools.com
Partitions and Wainscoting

5.5

General

When choosing solid surface for partitions, allowances for expansion and contraction must be considered. Avoid rigid fasteners that will not move. Rubber or nylon sleeves should be used for bolts going through the partition.

Toilet Partitions

Choose only Avonite® 100% acrylic solid surface 12mm (1/2”) or Studio Collection® Class I 1/2” (12.7mm) thickness to be used.

It is recommended that all hardware should have rubber or nylon grommets between the hardware and Avonite® surface. 1” (25mm) thick pilasters are recommended for support post running floor to ceiling.

For added strength, construct a 1” x 4” (25mm x 10cm) build-up with a 1/2” (12.7mm) channel for top and bottom rails.

Place no seams in stall doors.

Wall panels should be secured to back to walls with a full length “U” channel.

Partition hardware available at:

Bommer Industries   803-457-3301
Decolam                     418-527-2544
Jacknob                      888-231-9333

AVONITE® WAINSCOTING SYSTEM

This system utilizes our wide sheet Avonite® 100% acrylic solid surface 6mm (1/4”) product with 12mm (1/2”) base and trim. The Avonite® Wainscoting system provides stylish and durable wall protection. The panels can be Right-Sized to fit the application design.

The panels are adhered directly to dry wall. The wall surfaces and backsides of sheets need to be clean and free of dust. Panels and trim can be adhered with silicone. Allow 3mm (1/8”) gap between panels and fill with color matched silicone for an inconspicuous soft seam.
Aristech Surfaces LLC has created One Stop Shopping convenience by making available all of the necessary fabrication products through your local distributor. If items listed below are not available from your distributor, please notify Avonite® Technical Services, +1 (800) 428-6648.

**Avonite® Ultra Bond Cartridge**
SM4164-**
** Refers to 2 digit color code.

**Spare Mixing Tubes**
SM4162-01

**Dispensing Gun**
SM4160-00 MANUAL
Fabrication Support Materials

Inlay Resin—Quart
SM4130-00
Specially formulated inlay resin for creating custom detail designs in Avonite® material. Can be used with Avonite® Inlay Filler for an “intarsia” look.

Patch Kits
SM4021-**
Color coordinated Patch Kits each include (1) 4 oz. (113.4gm) can of filler, toners, and (1) 4 oz. (113.4gm) can of patching resin. Patch Kits are available in all current Studio Collection® colors. The catalyst hardener must be ordered separately (SM4001-10).
This is MEKP-9 catalyst and is usually available locally.

Spring Clamps—2” or 3” (50.8 - 76.2mm)
SM4063-00
SM4063-01
Needed for equal and consistent pressure to avoid open joints. Standard equipment for every fabricator.

Avonite® Thermo-Flow Tape
SM4065-00
Insulates from excessive heat in cook top cut outs. One roll of tape contains 18 yards (16.45m).
Finesse-It Finishing Material
SM4058-00
Second step in polishing system (1 liter).

Superbuff Adapter
SM4044-00
Buffing pad adapter for grinder/polisher.

Avonite® Dry-Cut Finishing System
SM4036-A Brown bar
SM4036-B Purple stick
Polishing system
Step 1: Brown bar, SM4036-A
Step 2: Purple stick, SM4036-B
Sanding and Polishing Accessories

**Superbuff 2 + 2 Pad (White)**

SM4045-
Polishing Pad used with Marine Paste compound and Avonite® Dry-Cut Finishing System Compound.

**Superbuff Polishing Pad (Yellow)**

SM4046-00 Polishing Pad used with Finishing Material
Care & Maintenance

The final finish of Avonite® material should be specified in one of the following finishes: Matte, Satin or High Gloss. Each customer must receive Avonite® Care & Maintenance information to ensure they understand the proper care and maintenance for the Avonite® installation and to register for the 10-Year Limited Warranty, or the new Installed Warranty as appropriate. The Avonite® Care & Maintenance information, as well as all warranty information is available online at www.aristechsurfaces.com

CARE AND MAINTENANCE GUIDELINES

**MATTE FINISH**

Cleaning:  
Soap and water will clean most stains.  
For more stubborn stains use a green Scotch-Brite® pad and an abrasive cleanser.

Scratches:  
To remove scratches, start sanding with 240 grit paper and then clean with and abrasive cleanser and a green Scotch-Brite® pad.

Remember to periodically go over the entire matte surface with a dry, green Scotch Brite® pad to return the original finish.

**SATIN FINISH**

Cleaning:  
Soap and water will clean most stains.  
For Stubborn Stains use a white Scotch-Brite® pad and non-abrasive cleanser such as Soft Scrub™.

Scratches:  
To remove scratches, start sanding with 400 grit paper followed by 600 grit paper. Then clean the area with Soft Scrub™ and a white Scotch-Brite® pad.

**HIGH GLOSS**

Cleaning:  
Soap and water will clean most stains.  
Use a polishing compound like 3M Perfect-It and a soft cloth to remove more stubborn stains.

Scratches:  
To remove scratches from a high gloss finish, start sanding with 400 grit paper. The surface must then be machine polished back to it’s original finish. If you do not own or have access to this equipment, you should contact your local Avonite® fabricator for assistance.

Avonite® Sink Care

Use the Matte Finish cleaning and scratch removal procedures above. To keep sink color bright, clean occasionally with liquid bleach and water. Fill the sink 1/4 full with water, add 1 to 2 cups of bleach, wipe the sides of the sink and let stand for 15 minutes. Then drain the sink and rinse.

**Do's and Don'ts Quick Reference**

- Always use a hot pad or trivet under hot pots or heat producing appliances.
- Always use a cutting board.
- Never stand on your counters.
- Avoid harsh chemicals such as drain cleaners and paint removers.
- For high gloss counters, do place felt protectors on the bottom of pottery or other hard objects.
- Do avoid sliding hard objects across these glossy surfaces.
- Always run cold water when pouring boiling water into Avonite® sinks.
Care & Maintenance (Español)

MATE

Del Final:
El jabón y el agua limpiarán la mayoría de las manchas. Para manchas más obstinadas utilice un pastilla escocesa verde del Brite y una despedregadora abrasiva.

Rasguños:
Para quitar rasguños, comience a arenar con el papel de 240 arena y después limpie con una despedregadora abrasiva y una pastilla escocesa verde del Brite.

Recuerde pasar periódicamente sobre la superficie mate entera con una pastilla escocesa verde seca del Brite volver el final original.

LIMPIEZA DEL FINAL

SATÉN
El jabón y el agua limpiarán la mayoría de las manchas. Para las manchas obstinadas utilice una pastilla escocesa blanca del Brite y una despedregadora que no sea abrasiva, tal como suavidad friega.

Rasguños:
A quitar rasguños, comience a arenar con 400 de papel de la arena seguido por el papel de 600 arenas. Entonces limpie el área consuavidad friegan y una pastilla escocesa blanca del Brite. Usted puede elegir rociar una capa ligera del protector para realzar el lustre.

ALTA LIMPIEZA

DEL
LUSTRE
El jabón y el agua quitarán la mayoría de las manchas. Utilice un compuesto que pulse como los 3m Perfect-It y un paño suave para quitar manchas más obstinadas.

Rasguños:
Para quitar rasguños de acabado del lustre alto, comience a arenar con el papel de 400 arenas. Entonces la superficie debe entonces ser máquina pulida de nuevo a su final original. Aconseje al cliente que contacte al fabricante de Avonite Surfaces si no poseen ni tienen acceso a este equipo.

FREGADERO DE AVONITE SURFACES:
Utilice la limpieza mate del final y rasgue los procedimientos de retiro arriba. Para mantener color del fregadero brillante, límpie de vez en cuando con el blanqueo líquido y rígue. Llene el fregadero 1/4 por completo de agua, agregue 1 a 2 tazas de blanqueo, limpie las caras del fregadero y deje el soporte por 15 minutos. Después drene el fregadero y aclárelo.

LAS QUIAS DE CONSULTA DE QUE HACER Y NO HACER

● Utilice una pista o un trivet caliente bajo los críos calientes o caliente siempre produzca aplicaciones.

● Siempre utilice una tabla.

● Nunca se pare sobre en sus contadores.

● Evite los productos químicos ásperos tales como productos de limpieza de discos del dren y removedores de pin ura.
Limited Warranty – Commercial and Residential Applications

Aristech Surfaces LLC ("ARISTECH") warrants to the original purchaser of any of its manufactured solid surface products that ARISTECH will, at its option, repair or replace the product if such product fails due to an ARISTECH manufacturing defect which is discovered during the first ten (10) years after the initial purchase, subject to the limitations set forth in this Limited Warranty.

This Limited Warranty applies only to Avonite Surfaces products that have been fabricated and installed by an authorized ARISTECH fabricator or installer in accordance with the installation instructions provided by ARISTECH; which have been used as recommended; and which have failed due to a manufacturing defect and not from damage caused by physical abuse, structural movement, excessive heat, or breakage not due to a Company defect in the manufacture of the material. This Limited Warranty does not cover damage caused by failure of any adhesive, caulk or other accessory, or failure of any caulked or filled joint or seam. This Limited Warranty covers the product for normal interior use in the United States, Mexico and Canada and does not cover the product moved from its original place of installation. Labor charges incurred during any installations are not included under this Limited Warranty.

This Limited Warranty does not apply to ARISTECH'S ADVANC3 solid surface product, which is covered by a separate one-year limited warranty.

This Limited Warranty applies to Avonite Surfaces products that are purchased after January 1, 2015, and maintained as described by Avonite Surfaces care and maintenance guide. (The care and maintenance guide may be found on the Avonite Surfaces website at www.avonitesurfaces.com.) You may obtain coverage by providing proof of the date of initial purchase. For service under this Limited Warranty, you must notify ARISTECH in writing, providing your name and address, a description of the product involved, the nature of the defect or failure, and proof of purchase and date of purchase. Repair or replacement shall not include any labor charges. This Limited Warranty is non-transferable and non-assignable.

The address to which Warranty problems should be reported is:

Aristech Surfaces LLC
7350 Empire Drive
Florence, KY 41042

ARISTECH will ship (freight collect) to you products repaired or replaced under this Limited Warranty.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, AND ARISTECH EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITED WARRANTY SETS FORTH THE INITIAL PURCHASER’S SOLE REMEDY IN CONNECTION WITH THE SALE OR USE OF PRODUCTS COVERED BY THIS LIMITED WARRANTY AND IN NO EVENT SHALL ARISTECH BE OTHERWISE LIABLE FOR ANY LOSS, DAMAGE OR INJURY OF ANY NATURE ARISING OUT OF THE SALE OR USE OF THE PRODUCTS DELIVERED HEREUNDER, WHETHER FOR NEGLIGENCE, BREACH OF CONTRACT OR UNDER ANY OTHER LEGAL OR EQUITABLE THEORY. ARISTECH SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE SALE OR USE OF SUCH PRODUCTS, INCLUDING BUT NOT LIMITED TO LOST PROFITS, REVENUES, ANTICIPATED SALES, BUSINESS OPPORTUNITIES OR FOR INTERRUPTION OF BUSINESS. THIS WARRANTY IS NON-TRANSFERABLE.

*Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

Note: This Avonite Surfaces Limited Warranty does not include items identified as ‘wear items’ that can be purchased through Avonite Surfaces. If you require replacement of a ‘wear item’, please contact ARISTECH.
FILING CLAIMS

To resolve warranty claims, we ask that our Distributor Representatives prepare a Warranty Claim Report. You can help us expedite the processing of warranty claims and achieve improved customer satisfaction by assisting in the following areas:

1. **Warranty Claim Report Form** - Please fill out completely so that the information needed to make decisions is readily available for us. This information helps us tremendously in the processing of the claim.

2. **Quality Inspection Checklist** - We ask your assistance in completing this form in detail, as this helps us to identify how the defect occurred. Your help in this area in the past has led to the advanced fabrication procedures that now exist in the solid surface industry, further improving our industry’s reputation.

3. **Job Layout** - Include a detailed diagram of the job, complete with all measurements, including distances to seams and seam locations. This helps us to accurately estimate the cost of fabrication and material, thereby reducing errors and allowing us to validate a repair/replacement quote.

4. **Photos** - Take three to four photographs (cell phone photos are acceptable) of the defective area and a photograph of the overall kitchen.

5. **Quotation** - Submit a written quotation on the repair or replacement of the job. Repair is encouraged over replacement. However, if repair is not possible, a quote of the job replacement is needed.

Warranty claims that are submitted with complete information will be resolved within two weeks of receipt of the claim. Without this information, the processing of a claim will be delayed. We ask for your continued cooperation and thank you for your assistance.

**AVONITE® TECHNICAL SERVICE DEPARTMENT +1 (800) 428-6648**
IMPORTANT NOTICE

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. User should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license. Any information or suggestion concerning applications, specifications or compliance with codes and standards is provided solely for your convenient reference and without any representation as to accuracy or suitability. Aristech Surfaces LLC disclaims any responsibility. The user must verify and test the suitability of any information or products for his specific application.

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