ACS International, Inc.
4775 S. Third Avenue, Tucson, AZ 85714
Tel: 520-889-1933 ♦ Fax: 520-889-6782
www.acstone.com ♦ E-mail: sales@acstone.com

CULTURED STONE NEWS

Seaming Dura Stone® *cont. from pg. 3*


Wavy Bit

Following instructions provided with the system (router) and using an accurate straight edge, make a "high-side" pass on one edge surface and one *lowside* pass on the other edge surface. Always dry fit the parts together before bonding the seam. After this check, scuff the surface of the edge with a course Scotch Brite® pad or 100 grit sandpaper, taking care not to touch the very edge of the seam.

When ready to apply the Acrybond solid surface adhesive, ACS provides comprehensive color cross reference charts to Dura Stone (as well as numerous competitive matches). In addition, ACS offers a thorough Acrybond adhesive manual, which goes into detail regarding the proper storage and use of the adhesive. For more information, please contact ACS toll free at 1.800.669.9214 or visit our web site at www.acstone.com.

Classifieds

As a courtesy to some of our customers, we have included this "Classified" section in this issue of Cultured Stone News. For more information regarding items listed, please contact the person corresponding to that item. ACS is supplying the information only and is not involved in the sale of these goods.

Learn the secrets of efficient and profitable solid surface fabrication as Tom Pinske personally demonstrates the tools and techniques he has developed over seventeen years as a solid surface fabricator. Tom will be visiting various locations throughout the U.S.—see **www.pinske-edge.com** for a complete schedule or call 1.800.874.6753 for more information.

THE PINSKE EDGE

CULTURED STONE NEWS

Spring 2005

Inside this Issue:

Improving Gel Coat Applications

A gel coat done well can enhance the appearance of any product line designed for such applications. However, a gel coat done poorly, can often times ruin a part, making the color uneven and/or cloudy in its appearance. Though there are a variety of issues that can arise with improper gel coating, this article pertains to the spray equipment. The following offers a few simple procedures when using a gel coat sprayer, in addition to timely equipment maintenance, can most often lead to a successful product.

The following are procedural start-up and shut-down steps used by several national shops using products such as Poly Stone™ and Artisone™ behind gel coat. Over looking steps when preparing the equipment during the initial start-up can easily be done. Performing the following check list can help avoid simple mistakes, which ultimately could save time and money.

1. Using the medium speed setting, agitate for approximately 10 minutes. Be sure to blend the mix and not sheer.
2. Turn on the in-line air.
3. Close the moisture trap.
4. Turn on the air motor.
5. Turn on the air assist.
6. Turn the heater on between 90° and 100°F.
7. Check spray pattern. Adjusting the air assist to acquire the preferred spray pattern (follows).
8. Turn on heat tunnel and set the temperature.
9. Assemble spray gun and ensuring the tip is clean and the cap is secure.

Developing Spray Pattern—Without Air Assist

When dialing the pressure on the gun, the lower the pressure is usually better, however if more air pressure is needed to achieve the optimal spray pattern—it's okay. Adjust the pressure to achieve (1) a consistent center portion of the spray pattern, which does not have any irregularities and (2) only fringes showing a "finger" like pattern. As mentioned above, the amount of pressure needed will vary, but the below spray pattern examples can serve as a guide when adjusting air pressure (figure 1).

Air Assist Containment

The purpose of the this step, after the initial spray pattern is established, is to remove the "fingers" that may be seen. To do this, the air is increased until the fingers are gone. Like the external spray pattern development, the lower the pressure the better. Finally, the addition of the catalyst to the spray pattern takes place. It is recommended that a pressure of 35 psi is used on the catalyst atomizing air regulator.

When establishing a pattern, things to consider are (1) if the droplets are overly large, the air atomization needs to be increased and (2) if, when establishing the spray pattern it seems to be blowing to much, try decreasing the air atomization.

Finally, when you add the catalyst to the spray pattern, which is also established by air atomization. It is recommended not to go below 35 psi in the catalyst atomizing air regulator. Check the spray pattern again and adjust the air pressure as needed. Large droplets—increase air; blowing to

Continued on pg. 2

ACS International, Inc.

Q & A

Q: *"Do you have any absorption data for solid surface material? We are looking at using solid surface material with our stainless steel WC pan to create a composite solution (i.e. colored outer surface). However we are concerned that the surface may be slightly absorbent and therefore contain bacteria?"*

A: If Solid surface parts are manufactured properly with a premium NPG/Isophthalic acid based resin it will have excellent water resistance properties. We prepared a clear casting of NPG/Iso Solid Surface resin and submitted it for ASTM-D570 Water absorption testing and got the following results:

Absorption Percent Weight GAIN:
Water Absorption 2 hrs at 100°C = 0.7105%
Water Absorption 24 hrs at 23°C = 0.1216%

The same test was preformed on a solid surface counter top made with 35% of the same NPG/ISO resin and 65% alumina trihydrate filler at 23°C under vacuum then post cured for 2 hours at 100°C. The results are even better:

After 2 hrs at 100°C = 0.0852%
After, 24 hrs at 23°C= 0.0087 %

As you can see if properly manufactured, solid surface parts have excellent water resistance making it a good candidate for your application.

Ken Lipovsky, CCT-I, CP, M
Reichhold
Application Specialist-Global

Gel Coat Application *continued from pg. 1*

much—decrease air. The illustration below provides examples of spray patterns.

Just as following proper start-up procedures is important for proper straying, shutting down can help maintain the spray equipment.

1. Turn air in-line off.
2. Open and drain the moisture oil trap.
3. Turn air motor off
4. Turn air assist off.
5. Turn heater off.
6. Change drum if needed and inspect drum gel.
7. Turn the heat tunnel off.
8. Put the night cap in place. The use of petroleum jelly is recommended for this step.
9. Add MEKP if needed.

Finally, doing weekly and monthly equipment checks can keep the gel coat equipment running smoothly and efficiently. Ensuring that the equipment is running how it should and when it is needed is another important part of proper gel coat spraying.

1. Calibrate the initiator
2. Drain the lower chamber
3. Oil the lower chamber rod thoroughly.
4. Disconnect catalyst pin.
5. Clean and lubricator trigger.
6. Check and clean the surge bottle.
7. Overflow bottles: Check status. If there is residue visible, investigate the cause.
8. If needed, change the spray booth filters.
9. Check the spray booth rollers.

The final section is the monthly checklist. Each month, it is recommended to observe/change the following:

1. Clean all filters: In-line and lower chamber.
2. Lubricate air motor.
3. Flush system with acetone.
4. Clean filter screen on siphon tube.
5. Check for air leaks.
6. Check and clean surge chamber as needed.
7. Clean gel booth area, including lights for proper safety.

Don Hay, CCT-CP
Central Sales Manager
ACS International, Inc.

*References: U.S.A. Custom Marble, Inc. and the CCT Study Guide.

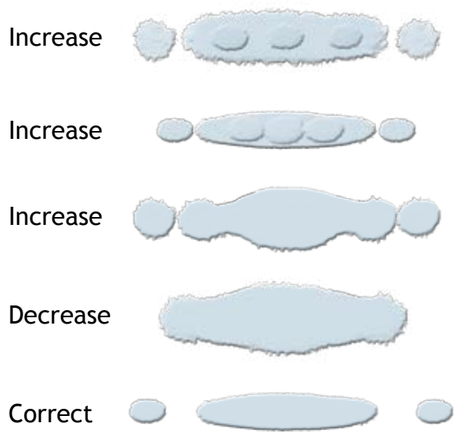

Figure 1: Spray Pattern—Without Air Assist

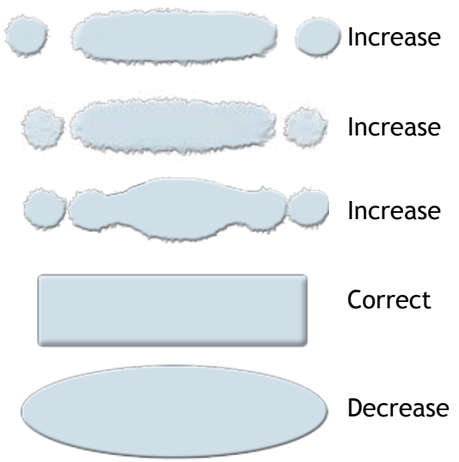

Figure 2: Spray Pattern—Air Assist Containment

Seaming Dura Stone® Solid Surface

One of the most important challenges that a fabricator has is seaming two pieces of material together. The use of quality, well maintained tools and a durable color matched adhesive, such as **Acrybond™**, are two essential elements to producing high quality, inconspicuous seams. Tools may be purchased by a variety of manufacturers.

A few things to keep in mind when preparing the seaming equipment are as follows. First, use a router with 1.5 to 3 horse power motor (many fabricators use a 3 HP router). The creation of an offset base such as a sturdy pressed melamine board is recommended. This allows for easy turning (if necessary) of the router/base an additional 1/16 of an inch from the part—without having to disassemble the straight edge. Be sure to use a double fluted carbide router bit and that the resulting edge is as straight as possible.

Standard Butt Seams (Deck Seams)
Use a good quality 1½ to 3 hp router. Refit standard base with square base. Two dimensions on the base allow you to turn base and remove an additional 1/16". Always use a ½" shank, double-fluted carbide router bit.

Set the router flat against straightedge. Lubricate with cornstarch to minimize friction between router base and straightedge. Move router with an even fast speed. Allow router sound to indicate 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, re-do by taking off an additional 1/16". 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. With 80 grit sandpaper on a hardwood block, lightly score the edges to be fused together. Th is step aids the adhesion between the two surfaces. Make only one or two passes. Be careful not to sand the top edge or to round the top edge.

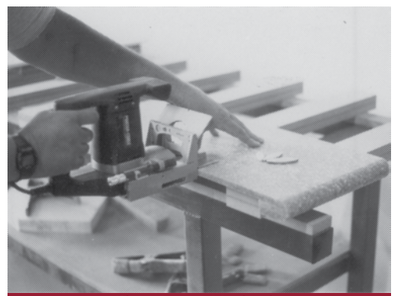
Plate Joiner Method

Plate Joiner Method
When using a plate joiner for seam assembly, it is important to remember that standard wafers may show through in applications where lighter colored sheets are used. To avoid this, either set the cutter to well below center, or obtain clear plastic wafers. Always check the dry fit for true alignment before assembly. Also, always place wafers well away from edges to avoid exposure when machining edge details. Wafers should be spaced approximately 6" to 9" on center.


Single Pass Seam Cutting

Single Pass Seam Cutting (Mirror Cutting)
Clamp both pieces to be joined ¼" apart and with the front edges perfectly aligned. Place straight to one side of the seam so that ½" straight cutter will remove 1/8"of material from both pieces simultaneously. This method will produce a superior seam and will deliver a balanced load to the router.

Wavy-Edge Bit Method
Using the wavy-edge system such as a Porter Cable®, Pinske® Edge, or Bosch® A-Line, which provide excellent vertical alignment of the seam and a stronger seam due to the increased surface area for bonding. This method eliminates the need for "biscuits" and has proven to be just as strong.

Re-Use?

Does the following sound familiar? A customer would like to change colors of their kitchen counter top from one solid surface color to another. You get the job and install a **Dura Stone®** *Magna Savannah*. What do you do with the *scrap* solid surface countertop that you've removed?

Instead of immediately disposing of the old countertop, one idea to consider is the re-use of the old material. The old pieces of solid surface material—be it Dura Stone or not—can be made into something else, relatively easily.

A few ideas to try would be window sills, shelves, table tops, or maybe book ends. Dura Stone is a durable long lasting product, so chances are the *scrap* material is in good condition and the home owner simply wanted a different color theme in the kitchen.

However, if you're going to throw it away, it is important to know that all of ACS's solid surface colors are considered non-hazardous by the Environmental Protection Agency. When discarded properly, there is very little affect on the environment since the material is non-soluable in water. **For more** safety **information**, please see the MSDS, located on the ACS website at **www.acstone.com**.

Remember, as with most products, it is always better to re-use than to discard.

Angela Trejo
Director of Marketing