

# ABET LAMINATI      TECHNICAL DATA

## STRATIFICATO SELF-SUPPORTING LAMINATE R605

### Manufacturer

Abet Laminati

1-800-228-2238

us.abetlaminati.com

ca.abetlaminati.com

### PRODUCT DESCRIPTION

**Basic Uses:** ABET LAMINATI Stratificato is a high-pressure, decorative, self-supporting laminate available in thicknesses from 2 mm (1/12") to 30 mm (1 1/4") thicknesses. Typical applications include flat applications such as toilet and dressing room partitions, work tables, shelving, instrumentation panels, desktops, bumper rails, and vehicle interior panels.

ABET LAMINATI Stratificato laminates have the following outstanding properties compared to woodcore products:

- Outstanding self-supporting properties compared to counter tops, other laminated covered wood cores, MDF, and particleboard
- Good dimensional stability and flatness
- High surface and edge impact resistance
- Excellent moisture and water resistance
- Excellent hygiene characteristics
- High resistance to chemicals and organic solvents
- Excellent resistance to termites
- Excellent resistance to fire
- Simple and quick assembly without the need for edging and adhesives
- High resistance to stress cracking

The outstanding surface and strength characteristics of Stratificato laminates make them ideal to use in clean rooms, damp areas where moisture is a concern, and rooms where sanitary issues are a concern. The surface is not adversely affected by moisture and is easy to clean with mild disinfectants.

The laminate is not susceptible to mold, corrosion, rust, or rot.

**Composition:** ABET LAMINATI Stratificato laminates are manufactured by pressing melamine impregnated print and solid color surface papers over phenolic impregnated kraft sheets at pressures over 1000 psi pressure and temperatures of approximately 300 degrees F (149 degrees C). The decorative surface is the same on both surfaces to provide a flat and dimensionally stable laminate.

**Limitations:** ABET LAMINATI Stratificato laminates are not recommended for exterior applications. Do not use in areas with temperatures higher than 150 degrees F (65 degrees C) for extended periods of time. This product is not to be exposed to continuous direct sunlight. Iridescent colors, fiber patterns, and metallic products do not meet regular wear resistance requirements and should not be used in high wear areas. While instruments may be mounted on ABET Laminati Stratificato laminates, ABET does not warrant any electrical properties.

**Colors and Patterns:** ABET LAMINATI Stratificato compact laminates are stocked in selected patterns, solid colors, finishes, sizes, and core color. Additional colors, finishes, sizes, and core color are available on special order. Check the actual sample for color before specifying. In order to provide a flat panel the colors are identical on both surfaces.

**Finishes:** Stratificato is offered in a selection of finishes.

**Sheet Size:** 215 cm (85 in) x 90 cm (35.7 in), 225 cm (89 in) x 100 cm (39.7 in) 244 cm (96.8 in) x 122 cm (48.4 in), 280 cm (111 in) x 130 cm (51.6 in) 305 cm (121 in) x 130 cm (51.6 in) The following sizes are limited to a maximum 18 mm (0.70 in) thickness: 420 cm (166 in) x 130 cm (51.6 in), 420 cm (166 in) x 161 cm (63.9 in), 366 cm (145 in) x 161 cm (63.9 in), 420 (166 in) x 186 (73.8 in)

**Thickness:** 6 mm (1/4") to 30 mm (1 1/4") thickness

**Core Color:** The core is available in black or brown colors.

**Weight:** 88 lb/cu.ft.

## **FABRICATION AND ASSEMBLY**

### **Conditioning, Cutting, and Drilling**

ABET LAMINATI Stratificato laminates should be allowed to acclimate for 72 hours before fabrication and assembly. Optimum conditions are approximately 23 degrees C (73 degrees F) and a relative humidity of 45 % to 55 %. When cutting, the rate of feed will depend on the thickness of the panel and the required quality of the cut. Chipping of the lower surface may be avoided by altering the angle at which the blade emerges. The use of scoring blade avoids this problem altogether. The saw blade marks may be eliminated on the edge by using a router with a 2-flute straight bit or a solid carbide spiral bit.

Carbide-tipped saw and router blades should be used for cutting. Cutting blades should be kept very sharp and a hold down used to prevent vibration.

The edges may be polished with a lemon oil furniture polish to obtain a semi-gloss finish.

Drill oversize holes for screws or bolts. The drill diameter should be at least 0.05 mm (0.002") larger than the specified diameter of the hole. Secure objects to the surface of the laminate with self-tapping screws in predrilled holes. With self-tapping screws, the hole must always be predrilled with the diameter of the hole being smaller than the external diameter of the screw. The depth of the hole must be at least 1 mm greater than the depth of penetration of the screw. The finer the thread, the firmer the screw holding.

### **Joinery Techniques and Hardware**

Request copies of Stratificato Self-Supporting Laminate Brochure or Stratificato Toilet Partition Brochure for different fabrication and joinery techniques.

### **Inspection:**

All laminates are to be inspected prior to fabrication or installation to ensure they are clean and free of surface defects. Protective peel coat should be removed prior to inspection.

### **Cutouts:**

To avoid stress cracking, do not use square-cut inside corners. All cutouts should be routed or filed to ensure smooth edges. A radius of 6.35 mm (1/4") or larger in the corners is recommended to minimize stress cracking for an inner side of 10" or less. This radius must gradually be increased for openings with a longer inner side.

### **Industry Practices:**

Material, equipment, and workmanship should conform to industry standard practices, conditions, procedures and recommendations as specified by ANSI/NEMA LD-3-2000, Standard for High-Pressure Decorative Laminates, Annex A, Application, Fabrication, and Installation or Architectural Woodworking Institute (AWI) "Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program".

## TECHNICAL DATA

### SURFACE PROPERTIES OF STRATIFICATO LAMINATES

<b>NEMA TEST</b>	<b>Typical Test Results</b>	<b>NEMA REQUIREMENTS CGS</b>
Light Resistance	No effect	Slight effect
Cleanability (cycle)	9	20 max
Stain Resistance Reagents 1 – 10 Reagents 11 – 15	No effect No effect	No effect Moderate effect
Boiling Water Resistance	No effect	Slight effect
High Temperature Resistance	No effect	Slight effect
Linear Glass Scratch Resistance	< 50 grams	No requirement
Ball Impact Resistance	>3000 mm >120"	1900 mm minimum 75" minimum
Dart Impact Resistance	>1000 mm >40"	No requirement
Radiant Heat Resistance	> 200 seconds	200 seconds min
Wear Resistance	400 cycles	400 cycles min.

### OTHER PROPERTIES OF STRATIFICATO LAMINATES

TEST METHOD	PROPERTY UNITS	STRATIFICATO SPECIFICATIONS
EN 438.2.4	Thickness Tolerance	± 5%
DIN 53479	Density Kg/m <sup>3</sup>	1.420 ± 0.030
ASTM D-1037	Density lb/cu.ft	88
EN 438.26	Abrasion Resistance    Revolutions	IP => 150 A => 350
EN 438-2.24	Steam Resistance	Grade=>4
EN 438-2.15	Stain Resistance    Group 1 - 2 Group 3 - 4	Min. Grade 5 Min. Grade 4
EN 438-2.16	Color Fastness    Blue Wool Scale Xenon Arc Lamp    Tones of Grey	Scale=>6 Tones=>4
EN 438-2.10	Dimensional Stability    %	L<=0.2 % T<=0.3 %
ISO 527	Tensile Strength                    N/mm <sup>2</sup>	L=>100 T=>70
ISO 178	Flexural Strength                    N/mm <sup>2</sup>	L=>100 T=>90
ISO 178	Modulus of Elasticity                N/mm <sup>2</sup>	L=>1000 T=>8000
DIN 53454	Resistance to Compression        N/mm <sup>2</sup>	>200
ASTM D-785	Rockwell Hardness                    HRE	> 78
ASTM D-696	Coefficient of Linear    per degree C Expansion	0.0005

## TRANSPORTATION AND STORAGE

Stratificato laminates should always be transported on flat, stable pallets. Secure the panels

so that they do not slip. Make sure panels do not slide over each other during loading and unloading operations. Lift them by hand or with means of a suction cup hoisting device. Dirt, foreign bodies and sharp edges rubbing against the surface can cause damage. Store the panels in a closed place where normal climatic conditions are guaranteed. Stack the panels on top of each other on a flat base. Never stand the panels on edge. The protective film, if applied, must be removed simultaneously from both surfaces.

## **MAINTENANCE AND CARE**

Stratificato Laminates have a hard, durable melamine surface and will maintain their attractive appearance longer than most other decorative surfacing materials and requires minimal maintenance. The decorative surface may be cleaned with warm water and a mild soap or detergent using a damp cloth or sponge. Difficult stains such as coffee and tea can be removed using a mild household and a soft bristle brush, cleaner/detergent repeating as necessary.

Do not use abrasive pads, scouring powders or cleaners as they may permanently dull or scratch the laminate surface making it susceptible to staining. Harsh chemicals such as oven cleaners, toilet cleaner, drain cleaner, and acids and strong alkalis chemicals will etch and discolor the decorative surface.

Free copies of our "Care and Cleaning of Laminates Guide" is available.

## **WARRANTY**

ABET LAMINATI warranties Stratificato Laminates against swelling, delamination, or warpage caused by humidity or proper maintenance. Should the above occur, a claim must be filed in writing to ABET, Inc. Claims must be approved by an authorized ABET representative and proof of purchase must be provided. Swelling must be more than 10 % of nominal panel thickness. Warpage must be more than 3 mm per every linear meter, and not due to an installation that has limited the panel's expansion. Delamination must not be caused by damage or chipping to the panel's edge. In the case of a valid claim ABET, Inc. is responsible only for the replacement of defective panels of equal value. ABET, Inc. is not responsible for any labor costs associated with the replacement.

## **TECHNICAL SERVICE**

For samples, literature, and technical assistance, call our toll-free line 800-228-2238 from 8:30AM to 5 PM, Monday thru Friday, or visit our web site [www.abetlaminati.com](http://www.abetlaminati.com).

# HOW TO SPECIFY ABET LAMINATI STRATIFICATO COMPACT GRADE HIGH PRESSURE LAMINATE R605

## Section 06067

### Plastic and Metal Surfacing Materials

**Note:** For additional information, contact:

#### Abet Laminati

5195 Timberlea Blvd.

Mississauga, ON L4W 2S3

Telephone: (905) 624-7070 or (800) 228-2238

Fax: (905) 624-7071

Web Site: [ca.abetlaminati.com](http://ca.abetlaminati.com)

## PART I GENERAL

### 1.1 PRODUCT DELIVERY AND STORAGE

Contractor shall supply and install ABET LAMINATI Stratificato compact high pressure laminate as shown on drawings and as specified.

Stratificato compact high pressure laminate should always be transported and stored on flat, stable pallets and the panels secured so they do not slip. Store the laminates in a closed place where normal climatic conditions are guaranteed.

### 1.2 PRECONDITIONING

ABET LAMINATI Stratificato compact laminates should be allowed to acclimate for ten days before fabrication and installation. Optimum conditions are approximately 23 degrees C (73 degrees F) and a relative humidity of 45% to 50%.

## **PART II      PRODUCTS**

### **2.1      STRATIFICATO COMPACT LAMINATE**

The decorative compact grade high pressure laminate shall be ABET Laminati Stratificato compact laminate supplied by ABET Inc. as follows:

Laminate Type/Grade	<u>Stratificato Compact Grade High Pressure Laminate</u>
Thickness	_____
Pattern Number	_____
Finish Name	_____
Core Color	_____

## **PART III      EXECUTION**

### **3.1      INSPECTION**

All laminate surfaces shall be inspected prior to fabrication to ensure they are sound, clean, and free of surface defects. The protective film, if applied, must be removed simultaneously from both surfaces.

### **3.2      INSTALLATION**

ABET Laminati Stratificato compact laminate cutting, drilling, and fastening procedures must be followed. Material, equipment, and workmanship should conform to industry practices, conditions, procedures and recommendations as specified by ANSI/NEMA LD-3-2000 (Latest Revision), Annex A, Application, Fabrication, and Installation (of High Pressure Decorative Laminates) and "Architectural Woodworking Quality Standards, Guide Specifications and Quality Certification Program" guidelines of the Architectural Woodwork Institute.

**SHORT FORM**

Laminate shall be Stratificato high pressure compact grade laminate supplied by ABET Inc., Englewood, N. J..

Type: ABET Laminati Stratificato Compact Grade Laminate

Thickness: \_\_\_\_\_

Surface:

Color Number \_\_\_\_\_

Finish:

Finish Number \_\_\_\_\_

Core Color:

\_\_\_\_\_

# Introduction

**What is STRATIFICATO?**  
STRATIFICATO is “compact grade” high pressure decorative laminate (HPDL). Compact grade laminate is defined as a self-supporting HPDL panel, the core of which is composed of cellulose layers impregnated with phenolic resin; the surface by one or more layers of cellulose fibers impregnated with thermosetting resins (typically melamine).

STRATIFICATO is manufactured with the combined application of heat (150 C) and high pressure (9MPa) in multi-daylight presses, which allow resin poly-condensation to occur. This makes it an incredibly strong and almost damage proof product. Panels are available in standard and flame retardant versions in a variety of textural finishes from matte to high gloss. The color palette encompasses more than 800 patterns and colors (see Fig 2). STRATIFICATO is also available in custom patterns with very low minimum run requirements.

**Why use STRATIFICATO?**  
STRATIFICATO is the ideal material for applications that require durability, sustainability, ease of fabrication/installation, low maintenance/high wear, reasonable cost, wide range of colors/textures and high performance in wet environments. It cuts like wood, requires no finishing or sealing and installs quickly. From an environmental perspective, STRATIFICATO has little or no VOCs or off-gassing, and is easily recyclable. Because STRATIFICATO has been used with success in Europe for 30 years, it allows you, the fabricator, to approach the North American market with a cutting edge, design-driven product with proven performance characteristics.

The advantages of using STRATIFICATO include:

- Self-supporting (no substrate required)
- Easy to machine and fabricate
- Excellent fire, smoke and toxic gasses retardant properties
- Environmentally friendly
- High resistance to water and steam
- Easy to clean
- Excellent hygienic properties
- Dimensional stability and flatness
- Anti-static
- Resistant to chemicals and organic solvents
- Food contact safe
- Mechanically sturdy (will accept screws)

## Performance Characteristics

Natural variations in temperature and humidity have no adverse effect on the properties of STRATIFICATO HPDL when installed properly. Extreme fluctuations of temperature and relative humidity do not affect the appearance or the properties of the panel, which is not affected by thermal shock leaving unchanged its physical and mechanical properties.

# Applications

Stratificato Compact Grade Laminates are ideal for most interior decorative surfacing applications. Its moisture resistance, scratch resistance, chemical resistance and structural properties make it the ideal surface for high-wear areas. Because it is available in hundreds of colors and finishes, as well as custom colors and prints, Stratificato is the perfect material for design-driven applications.

A partial list of suggested Stratificato applications includes:

- Tabletops
- Cabinet bases, drawers and doors
- Hospital room walls and floors
- Clean rooms
- Lockers, changing room benches
- Countertops
- Interior wall cladding
- Decorative screens and wall panels
- Shelving
- Toilet partitions
- Doors
- Office and/or kitchen furniture

From a design perspective, the ability to incorporate custom digital print designs into the Stratificato panel offers a whole new dimension for decorative surfacing. Captured within a tough, transparent melamine outer layer, Print designs are unique, durable and eye-catching. Better yet, due to ABET's unique manufacturing process, Print Stratificato is available with low minimum quantity sheet orders.

## Rule #1

### **Relative Humidity vs. Moisture**

Stratificato is an ideal material for use in both wet and dry environments. It is highly resistant to water absorption and discoloration through contact with water. Warping can be an issue, however, if there is a difference in humidity on the front side of the panel relative to the back side.

**It is extremely important to provide ventilation to the backside of the panel IN EVERY INSTALLATION to avoid any chance of warping.**

Adequate ventilation equalizes the humidity levels between the front and back sides of the panel, thereby keeping the panel flat.

*Fabrication Tip:*

*The amount of moisture present in the room is not the issue; airflow on both sides of the panel is what is important. Thus, whether the application is in a wet environment such as a shower or a dry environment like a dining room table, it is critical that you create airflow on the backside of the panel, which equalizes the humidity.*

## Handling & Storage

The potential for warping when storing and transporting Stratificato panels is always a consideration. Warping can be avoided by following a few important guidelines:

Stratificato panels must be stacked horizontally on a flat surface. Be sure to place protective cardboard between the pallet and the first sheet.

Stratificato panels ship with protective peel coat vapor barriers affixed to both sides of the sheet. Leave these in place until it is time to fabricate the panels.

Do not stack or store Stratificato panels on edge. They must be stored flat, fully supported.

Remove both the protective film from the front and back sides of the panel at the time of fabrication. Do not fabricate with the peel coat attached to one side or the other, or both.

Stratificato is extremely scratch resistant, but improper handling can mar the surface. Never slide the panels over each other, as this has the potential of creating scratches on the surface

## Layout

The sheet size of Stratificato is 51" x 120" (130cm x 305cm). Careful planning while laying out the panels will maximize material use and reduce offal. You should keep the following points in mind when laying out a project:

Prior to processing panels, check for any defects in the material.

Stratificato contains a grain. This is due to the manufacturing process. Even solid colors have a grain, although it may not be obvious under casual inspection.

When laying out the project, make sure the grain flows in the same direction for any panel sections that are joined together.

Seams in Stratificato are inconspicuous, not invisible.

You may place a deck seam inside a cutout, such as a sink or a range

All inside corners require minimum 1/4" radius corner

## Countertops

Stratificato Compact Grade Laminate is the perfect surface for beautiful, durable countertops. Its resistance to heat, chemicals and scratches make it a hard working, everyday countertop surface in those applications where exceptional wear and tear are the norm. At the same time, the color palette, choice of textures and the ability to customize the look and feel of the product make it a designer's dream.

As with all decorative surfacing materials, Stratificato Compact Grade Laminate must be fabricated and installed properly in order to enjoy the outstanding physical and aesthetic properties of this unique material. Adherence to the guidelines presented in this Fabrication Guide will ensure a beautiful and long-lasting installation.

## Cutting and Sawing

### General Notes:

- Carbide or diamond tooling.
- Make lengthwise cuts in the sheet first.
- No sharp inside corners (minimum radius of 1/4").

### Saw Blades:

- Triple Chip or Alternate Bevel blades with -5 degree hook.
- The saw blade must have a minimum of 6 teeth per diameter inch. For example, a 12" blade should have a minimum of 72 teeth (12" x 6 teeth = 72 teeth)

- For best results (smooth cut, less chip out), only two saw teeth should be exposed exiting the material.

Feed speeds will be dependent on thickness of material and equipment used. Large stationary equipment, such as a CNC will produce a much better cut.

## Screws & Fasteners

DO NOT screw into Stratificato without pre-drilling. Drill bits with a point angle of less than or equal to 90 degrees are recommended. If drilling through the panel, be sure to place the panel on a spoil board to prevent chipping.

When drilling through the panel always use a rigid spoilboard under the panel to minimize chip out

For blind holes (applications where the hardware does not go through the sheet), you may use aluminum or brass inserts and/or the material may be tapped with a thread to accept a machine screw. DO NOT use wood screws.

You should adhere to the following guidelines:

### Perpendicular to the Panel

1. Use a flat angled drill bit.
2. Maximum drilling depth is 1 to 1.5mm less than the thickness of the panel. Thus, in the case of 12mm Stratificato, the maximum drilling depth is 10.5mm
3. Stop the screw or insert 1mm from the depth of the drilled hole
4. Self-tapping screws may be used. Be sure to pre-drill the hole using the guidelines outlined above. The diameter of the hole should be equal to the shank of the screw.
5. Expandable inserts may be used (i.e., aluminum or brass).

### Parallel to the Panel, i.e., screwing into the edge.

1. Tapping a screw thread is recommended. Self-tapping screws are acceptable as well.
2. The diameter of the drilled hole should be the same as the shank of the screw.
3. Stop the screw 1mm from the bottom of the drilled hole.
4. The diameter of the screw may be no larger than the thickness of the panel, minus 3mm. In other words, for a 12mm panel, the screw shank diameter may be no larger than 9mm

Expandable inserts (aluminum or brass) MAY NOT be used when screwing into the edge of the panel.

# Gluing & Seaming

## General Guidelines

ABET LAMINATI has partnered with **Integra Adhesives\*** to provide a **color-matched** adhesive system for gluing Stratificato panels to each other, as well as dissimilar materials, such as solid surface, plastics and metals. While the fabrication techniques for gluing and seaming are relatively similar to those used when joining solid surface, several critical procedures must be observed in order to achieve a satisfactory installation.

- The adhesive creates a mechanical bond with the Stratificato panel, which means care must be taken to provide extra surface area for the glue to adhere to. Unlike solid surface adhesives, there is no chemical bond.
- All joints must be flat, straight and true.
- Joint strength is considerably stronger when both sides of the joint are roughed up with 80 grit sandpaper. Thus, if a router bit is used to cut a smooth and true joint between two panels, both sides of the joint must be roughed up with 80 grit sandpaper to insure a strong bond.
- When seaming two Stratificato panels together (i.e., deck seams), joint strength is greatly increased when wood biscuit joints are employed.
- When seaming materials to the horizontal surface of Stratificato (i.e., solid surface bowls, inlays, decorative skirts) the Stratificato panel should be thoroughly sanded with a belt sander using 80 grit sandpaper. The melamine layer on the bottom side of the Stratificato must be completely removed by sanding.
- Horizontal seaming should be limited to the backside of the Stratificato panel or areas that will not be seen. That is because the sanding prep of the panel required to make a strong seam will unalterably mar the finish of the panel.
- Never sand the decorative side of the panel. It cannot be repaired. Use masking tape to protect the face of the panel from glue squeeze-out and thinners.
- Limit the use of chemicals such as acetone and lacquer thinner on the decorative face of the panel, as it could cause streaking, which might be difficult to remove

**For sealing purposes, any silicone will work well. For adhesion however, we recommend**

**Integra Adhesives Inc.**

Intl. Phone: +1 (604) 850-1321

Intl. Fax: +1 (604) 850-1354

**Address:** 4-33759 Morey Ave, Abbotsford BC V2S 2W5

**Black 3218 Trim Bonder 100ml Kit w/1 Tip**

**\*Note: Do not go through a distributor, you must contact Integra's head office direct to insure you receive the recommended product\***

## Deck Seams

1. After preparing material for seaming, cut joints for wood biscuits.
2. Lightly sand both sides of the joint with a block sander (100 grit abrasive). This creates a greater surface area for bonding the adhesive.
3. Apply masking tape to the top surface approximately 1mm from the edge on either side of the joint.
4. Fill the biscuit joints with adhesive.
5. Insert #20 wood biscuits.
6. Apply the adhesive to the joint and push pieces together. (Applying the adhesive to both surfaces will ensure complete coverage). Note: Open working time is 10-15 minutes, depending on heat and humidity.
7. A commercial seam-setter is recommended for clamping the joint.
8. Remove excess adhesive by wiping flush to the level of the masking tape. The adhesive shrinks during the cure process so more than one layer of masking tape may be used to increase thickness of the adhesive on the surface.
9. Allow 20 – 30 minutes to cure. After curing, remove clamps and then remove the masking tape.
10. To remove excess adhesive: Soak a soft cloth with lacquer thinner and rub over cured bead of adhesive (this will soften the adhesive). Allow time for the lacquer thinner to saturate the bead.
11. Use a piece of laminate or a plastic scraper, gently rub back and forth over the softened adhesive to wear away the excess.
12. Once the bead is almost flush, wet a soft cloth with Stratificato Polish and remove the remaining adhesive with the cloth and solution.
13. When finished, allow to dry and re-apply Stratificato polish or other countertop cleaner/polish if desired.

## Drop Edges

When fabricating drop edges with Stratificato it is important to consider how the material is made, i.e., a series of phenolic impregnated kraft paper layers sandwiched between top and bottom decorative layers coated with melamine (see Fig 1). Thus, even when the solid core color is the “same” as the decorative top and bottom layers, they are made of two different types of materials and, thus, will not color match with 100% accuracy.

Perhaps the easiest and most fool-proof method for dealing with the color match issue is to machine the parts to be seamed so that the solid core of each piece is bonded to the solid core of the corresponding piece. Most often that consists of shaving the decorative outer layers from the drop edge piece (either before or after glue-up, depending on the method used), and routing an inset groove into the underside of the countertop deck, which will receive the drop edge piece (see Fig. 2). Employing this method coupled with using color-matched adhesive will result in a very acceptable looking seam that is quite inconspicuous to the casual observer.

Three methods for fabricating decorative drop edges are outlined in this manual: the **Stand-Up**, **Stacked** and **Miter-Fold** edges. The basic tools required for fabricating drop edges are a router, straight edge and table saw. Optimally, a CNC router would be the most efficient tool for fabricating Stratificato.

## Stand-Up Edge

The advantage of the Stand-Up edge is that it makes efficient use of materials and has just one joint to the countertop deck. The procedure is as follows:

1. Cut the countertop deck to shape.
2. Cut drop edge strips from the material. The width of the strips will depend on the height of the finished drop edge. For a 1 1/2" edge (nominal), cut the strips 15/16" wide.
3. Route an inset groove on the underside of the countertop deck 1/16" deep X 7/16" wide. When the drop edge pieces are inserted into the groove they will extend beyond the lip of the countertop by 1/16".
4. Cut and dry fit strips to fit. Be sure there are no gaps present at joints. Use spring clamps to hold the pieces in place during fitting.
5. For radius corners, see the section on fabricating a **radius**.
6. Clean the drop edge strips and the inset groove with denatured alcohol. Use a clean, white cotton cloth. Do not use paper cloths, as they will leave fragments behind on the material just cleaned.
7. Using the proper color adhesive, purge the adhesive cartridge before applying the glue. Run a single bead of adhesive the full length of the strip to be adhered to the countertop deck. Open working time for the adhesive is 10-15 minutes, depending on atmosphere conditions in your shop. Plan your work accordingly.
8. Insert and clamp the drop edges in place using 2" spring clamps spaced approximately 3" apart.

9. Allow 20-30 minutes for the adhesive to cure. Once the adhesive is cured, remove the spring clamps and flip the countertop on the work table so that the top of the deck is facing out.

10. If working with a hand router, be sure the router base will not scratch the surface of the countertop. For best results lay a piece of scrap high pressure laminate between the countertop deck and the router. *Scratches in the decorative layer of Stratificato cannot be repaired.*

11. Trim the full edge using a straight cutter bit. The cut should be set to trim 1/16" off the drop edge piece, which is the decorative, melamine coated layer, thus exposing the phenolic base.

12. After trimming, route the decorative edge profile. We highly recommend either a chamfered or eased edge.

13. Sand the machined edge using a random orbital sander and a 60 micron abrasive disc to remove chatter marks. Finish with a 30 micron abrasive disk. When sanding the edge detail, be sure the abrasive goes only to the leading edge of the top decorative layer of Stratificato.

## Mitre-Fold

The **advantages** of a mitre-fold edge include:

- Only one seam is visible
- The face of the countertop deck and the drop edge match exactly
- There are fewer fabrication steps, which normally results in faster fabrication times

The **disadvantages** of a mitre-fold edge include:

- It works only with rectangular and square shapes
- Fabricating a radius is time consuming, with questionable results
- Unless the edge is reinforced with a backer strip, its strength is less than other drop edge methods

### *Fabrication Steps*

1. Cut the countertop deck and drop edge piece on a table saw with the blade set to 45 degrees. The width of the edge piece should cut to the desired finish height of the drop edge.

2. Dry fit the edge and countertop deck to ensure a tight fit. Clean the piece and the countertop deck with denatured alcohol. With the edge piece butted up to the deck, apply the clear tape across the joint and press firmly into place. The tape will act as a hinge during the gluing process.

3. Flip the top and fold the edge into place. Inspect for a tight fit. Clean the backside of the deck and, with the edge still folded up, apply stop blocks to the underside of the deck with hot melt adhesive. Take care that no hot melt sticks to the edge piece.

4. Lay the edge piece flat, clean the joint with denatured alcohol. Purge the joint adhesive, attach the mixer tip and purge again. Apply a generous bead of adhesive to the joint, flip the edge perpendicular to the countertop deck and clamp using 2" spring clamps. Clamp horizontally across the edge piece and the stop blocks first, then clamp vertically across the face of the deck and the bottom of the edge piece. Place clamps 2"-3" apart.

5. Allow approximately 15-30 minutes for the adhesive to cure (curing times will vary, depending on heat and humidity). Test the cure state of the adhesive by pressing your fingernail into the squeeze-out. If no impression is made, the adhesive has cured. When the adhesive is ready, remove the spring clamps.

6. Flip the top and remove the tape. Sand the joint with fine sandpaper to remove any squeeze-out and to break the edge of the drop edge. Clean with denatured alcohol.

7. In most cases you will want to reinforce the drop edge by installing a backer piece. This may be accomplished by flipping the countertop so that the underside is exposed ([Fabrication Tip: Installing the backer piece immediately after removing the stop blocks will save an additional step of flipping the top and will reduce fabrication time](#)). Dry fit the backer strip, clean, glue and clamp.

## Radius Corner

Fabricating a radius corner into your countertop project adds a custom look and improves the strength of the countertop by eliminating [stress risers](#). Following are the steps for fabricating both inside and outside radius corners.

1. Route an inset into the underside of the countertop deck that will accept the drop edge strips. Route a square area equal in size the diameter of the desired radius in the desired area.

2. Cut two square pieces of material 1/4" larger than the diameter of the desired radius. For example, for a 2" outside radius, cut two square pieces 2 1/4" x 2 1/4". Trim 1/32" from the top and bottom faces of the blocks to remove the decorative melamine layer.

3. Glue the two pieces together, face to face. Once the adhesive has cured, trim the resulting block to 2" x 2" square. You will then have an inset piece 2" W x 2" L x 7/8" H.

4. Dry fit the drop edges so they are flush with the inset block.

5. Clean, glue and clamp the edge strips and inset block to the countertop deck. When trimming the edges, use either a template and router or program the CNC to apply the correct radius. Once the edges are cleaned up, machine the decorative edge detail and finish sand.

## Sinks

Stratificato compact grade panels are particularly well suited for all types of sink configurations. Stratificato panels will accept stainless steel, composite or porcelain drop-in bowls; underslung installation in combination with silicone adhesive; and seamed undermount solid surface bowls. A few general principles apply:

- When screwing mounting hardware into the underside of the Stratificato panel always use **metal inserts or self tapping screws**.
- Never sand the face of the Stratificato panel.

Especially with heavy bowls like porcelain sinks, **install brackets** to support the weight of the bowl.

## Porcelain or Stainless Undermount Sink

### *Procedure:*

We recommend using the **Vance Industries Undermounter** system, available through [www.vanceind.com](http://www.vanceind.com). This system allows you to accurately control positioning of the sink, and eliminates drilling or attaching fasteners to the Stratificato panel.

1. I-Beams support the sink. There is no need to install wooden supports or attach anything to the Stratificato panels.
2. Find the center of the cabinet and mark both the front and back cabinet rails.
3. Install the steel baskets included in the Undermounter kit onto the cabinet frame using the supplied screws.
4. Measure and mark the I-Beam 3/8" short of the cabinet opening. Cut the I-Beam with a hacksaw.
5. Thread each bolt with a nut about 2 turns. Slide the nut into the slot of the I-Beam and position them spaced equally front to back.
6. Thread the bolts through the I-Beams so that enough of the bolt is exposed to add the plastic caps to the end of each bolt.
7. Place the rails into the steel baskets. Note: There is no mechanical attachment required.
8. The beams are ready for the sink.
9. Place the sink on the beams.
10. Place a level across the opening of the cabinet resting on the top of the cabinet frame. Adjust the Undermounter bolts to raise the sink within 1/8" of the bottom of the level .
11. Run a bead of silicone caulk around the sink.
12. Install the Stratificato panel onto the cabinet.

Raise the sink by adjusting the bolts until the sink makes contact with the countertop.

# Seamed Undermount Sink

## Overview

A seamed undermount sink is an aesthetically and sanitary alternative for kitchen and bathroom countertops. You may seam a solid surface or acrylic sink into Stratificato using many of the same techniques employed for seaming a solid surface bowl into a solid surface countertops. Be sure to pay particular attention to the following:

- Prepare the underside of the countertop deck by sanding with 80 grit sandpaper
- Protect the face of the countertop deck from inadvertent scratches from the router base
- Never sand the face of the deck when finishing the joint between the sink and the countertop

## Procedure

1. Place the Stratificato panel face down on the work surface. Mark the area where the sink will be inserted and, using a belt sander, rough up the panel with 80 grit abrasive. Be sure to sand below the melamine layer.
2. Mark the center line for the bowl and layout the position of the sink. Install stop blocks using super glue.
3. Route a hole approximately 4" in diameter in the Stratificato panel near the area where the drain of the sink is located.
4. Clean the countertop deck and the rim of the sink with denatured alcohol.
5. Apply a generous bead of adhesive around the rim of the sink. Avoid laying two parallel lines, which might create an air pocket and weaken the joint.
6. Place the bowl on the deck, using the stop blocks as a guide for placement. Clamp the bowl to the deck using weights, pipe clamps or wide mouth clamps.
7. When the adhesive has cured, flip the countertop. Using a straight cutting bit fitted with a teflon bearing, rough cut the opening of the countertop deck to a dimension slightly smaller than the bowl.
8. Install a sink bevel bit with teflon bearing on the router and finish cut the deck to the sink. When performing routing operations you may wish to place a piece of high pressure laminate between the router and the countertop deck to avoid scratching the surface of the Stratificato.
9. Using a random orbital sander, remove any remaining adhesive squeeze out between the bowl and the countertop deck. **DO NOT** sand onto the face of the deck. You will not be able to remove scratches from the countertop deck.
10. Finish sand the Stratificato core and transition point to the bowl with 30 micron abrasive.

# Finishing

## General Guidelines

- Never sand the decorative face of the panel. Scratches and sanding marks that penetrate the protective melamine coating cannot be repaired.
- Use chemicals such as lacquer thinner and denatured alcohol on the face of the panel sparingly.
- When performing gluing operations, such as a deck seam, apply masking tape to both sides of the joint.
- Stratificato's phenolic core may be shaped and sanded to a sheen. This is accomplished through a series of sanding steps.

### Stand-up and/or Stacked Edges:

1. Apply the decorative edge with a router. If using a hand-held router we recommend placing a piece of high pressure laminate between the router base and the panel's decorative layer to minimize the chances of scratching.
2. Using a random orbital sander fitted with 80 micron/150 grit abrasive, sand the face of the edge smooth, taking care to sand out any deep scratches.
3. Clean the edge with a rag soaked with denatured alcohol. Apply 30 micron/360 grit abrasive and sand the exposed edge. Wipe clean. The result is a satin finish.

### Mitre-Fold Edge:

1. After removing the clear stretch tape from the joint, carefully remove any remaining squeeze-out with a rag soaked with lacquer thinner. Avoid spreading the lacquer thinner onto the face of panel, since it will leave a residue that might be visible to the eye.
2. Once the squeeze-out has been removed, use a block sander to remove excess adhesive, finish the mitre-fold joint with 80 micron/150 grit abrasive. This is the shaping step: the objective is to remove any remaining adhesive and smooth the sharp corner of the mitre-fold joint.
3. Finish sand with 30 micron/360 grit abrasive.

### Seamed-In Bowl:

1. Remove squeeze-out by trimming with a router as described in the [Seamed Undermount Sink](#) section.
2. Carefully sand the face of the bowl and exposed phenolic Stratificato core with 80 micron/150 grit abrasive until all squeeze-out has been removed, thereby creating a smooth transition between the bowl and the phenolic panel.

Finish sand using 30 micron/360 grit abrasive.

# Installation

## Guidelines

Never install Stratificato panels over a full substrate. The ambient humidity must be equalized on both sides of the panel.

- In most cases do not use mechanical fasteners. The top should be secured to the cabinet using high grade silicone sealant.
- Use 1/8" neoprene tape around the perimeter of the cabinet to create air flow/humidity equalization.

## Procedure

1. Inspect the cabinets. Make sure they are flat. Remove any full substrate. In the event the cabinets are constructed in such a way that a full substrate is part of the cabinet structure, you will need to cut ventilation holes in the substrate. There are two acceptable methods:

- Cut 6" radius holes every 12 inches, front to back and side to side.
- Cut the majority of the substrate leaving a 3" radius around the perimeter and middle supports.

2. Make any cutouts for sinks or appliances before installing the countertop.

3. Install 1/8" neoprene tape (adhesive on one side only) around the perimeter of the cabinet and front to back on the cabinet supports.

4. Prepare the tip of the silicone tube by cutting a "V" 5/16" down from the end of the tip. When the adhesive is applied to the cabinet it creates a "peaked" configuration, which compresses with the weight of the countertop.

5. Apply a continuous bead of silicone around the perimeter of the cabinets on the INSIDE of the neoprene tape.

## Backsplashes

In order to avoid unsightly gaps between the countertop and the backsplash as cabinets settle over time, adhere the backsplash to the countertop as follows:

1. Cut and dry fit the backsplashes to the countertop.

2. Lay the backsplash on its face and apply a small, continuous bead of silicone to the bottom of the splash closer to the backside of the splash. Putting the caulk towards the back prevents it from squeezing out onto the countertop when the splash is set in place.

3. Apply daubs of hot melt adhesive to the backside of the splash and immediately set the splash into place. The hot melt acts as a clamp until the silicone has a chance to cure.

4. Caulk the seam between the backsplash and the countertop. We highly recommend the push method of applying silicone caulk (view the [video](#) for step-by-step instructions).

## “Push Method” Caulking

### Overview

No matter how well the project is fabricated and installed, if the finishing touches are not done properly the customer will not be happy. Applying silicone caulking around backsplashes is one of those finishing touches that could make or break a job. Using the Push Method caulking procedure will save you lots of headaches and costly call backs.

### Method

1. Use the least amount of caulking possible. When using the Push Method you cut the smallest possible opening in the silicone tube tip.
2. Do not cut the tip on an angle.
3. Apply silicone to the underside and ends of the splash. This will create a bond between the splash and the countertop deck. Thus, when the cabinets settle (and they almost always do), the splash follows the countertop and not the wall. This saves you a return trip to the jobsite.
4. Once the splash has been caulked and set in place, run a **SMALL** bead of caulk along the joint between the splash and the countertop deck. In this case, **LESS IS BETTER!**

Smooth out the joint with your finger. If you have done it properly, little or no silicone will transfer onto your finger.

## Wall Cladding

Stratificato is an ideal material for wall cladding for many reasons:

- High impact resistance
- Stain resistance
- Wide selection of colors and textures, including custom digital prints
- Ease of assembly and installation

Certain general fabrication and installation procedures must be followed for a successful installation:

- Never adhere Stratificato directly to the wall – always mount to a substructure
- Do not cover humid walls with Stratificato
- Special attention must be paid to external walls where condensation might occur
- Never install Stratificato where it is in constant contact with pooled water
- Both sides of joints should be in the same running direction of the panel
- Equalize the humidity on both sides of the panel by providing air inlets to the substrate cavity
- Ideally, the substrate cavity should be a minimum of 2" deep
- Panel edges should be spaced a minimum of 1/8" apart

Heavy objects should be secured to the underlying substructure

## Overview

Stratificato panels can be bonded with an MS (modified silicone) polymer adhesive. Please note that processing times, open times and application methods do vary depending on the adhesive manufacturer. Please consult the adhesive manufacturer's processing guideline. Never use other material than what is prescribed by the adhesive manufacturer.

### Advantages

- Blind fixing method at the most reasonable price
- No minimum panel thickness requirement
- Easy and quick mounting technique
- No need to drill holes in the panel
- Elastic bonding – good for environments where vibrations are present

### Disadvantages

- Dismantling of glued panels takes more effort compared to screwed

Once attached, the cladding can't be readjusted

# Glue Method on Aluminum Substrate

## Method

Consult the adhesive manufacturer's recommendations for pre-treatment of the **wood substrate**. In general, the following guidelines should be observed:

1. The substrate should be constructed of planed wood without wood preservative

2. Apply a primer to the substrate. Consult the adhesive manufacturer for specific application instructions. Depending on the material used, curing times may vary anywhere from a few hours to a few weeks.
3. Always ensure there is adequate ventilation when applying primer.

The **Stratificato panels** should be pre-treated as follows:

1. Follow the adhesive manufacturer's recommendations for cleaning and/or priming the aluminum substrate
2. If a primer is used, be sure to let it cure for the specified period of time.

### **Gluing Procedure**

- All surfaces to be glued must be kept clean, dry and dust/grease free. If necessary, clean the treated surfaces again before proceeding with the gluing.
- Apply a double-sided neoprene foam tape approximately 3 mm thick and 10 mm wide onto the vertical structure.
- Along the line of a joint, the neoprene tape should be laid on the joint side of the structure, in order to avoid visible glue residues in the joint. This tape has two purposes: first, it holds the panel in place until the adhesive reaches its full bonding capacity and secondly, the thickness of the tape will give the glue an appropriate mass and guarantee an adequate, flexible bond.
- Remove the protective film of the neoprene band.
- Alongside the neoprene tape, apply a continuous, pyramid-shaped trail of glue about 8mm high using a glue gun with a nozzle designed specifically for this purpose.
- Now position and press the panel down onto the tape and adhesive. Note: the panel should be placed/positioned carefully and in the correct position. It is advisable to create a stable, accurate base with the first row of panels. For the panels placed subsequently, use the first row of panels on which small spacer pieces are placed along the line of the joint. Panel off-cuts can be used as spacer pieces, since their thickness corresponds with the joint width employed.

It is advisable to proceed panel per panel.

## **Glue Method on Wood Substrate**

### **Method**

Consult the adhesive manufacturer's recommendations for pre-treatment of the **wood substrate**. In general, the following guidelines should be observed:

1. The substrate should be constructed of planed wood without wood preservative
2. Apply a primer to the substrate. Consult the adhesive manufacturer for specific application instructions. Depending on the material used, curing times may vary anywhere from a few hours to a few weeks.
3. Always ensure there is adequate ventilation when applying primer.

The **Stratificato panels** should be pre-treated as follows:

1. Clean the backside of the panel per the adhesive manufacturer's instructions.
2. Prime the area to be glued with a primer (depending on the manufacturer's instructions).
3. If a primer is used, be sure to let it cure for the specified period of time.

### **Gluing Procedure**

- All surfaces to be glued must be kept clean, dry and dust/grease free. If necessary, clean the treated surfaces again before proceeding with the gluing.
- Apply a double-sided neoprene foam tape approximately 3 mm thick and 10 mm wide onto the vertical structure.
- Along the line of a joint, the neoprene tape should be laid on the joint side of the structure, in order to avoid visible glue residues in the joint. This tape has two purposes: first, it holds the panel in place until the adhesive reaches its full bonding capacity and secondly, the thickness of the tape will give the glue an appropriate mass and guarantee an adequate, flexible bond.
- Remove the protective film of the neoprene band.
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- Now position and press the panel down onto the tape and adhesive. Note: the panel should be placed/positioned carefully and in the correct position. It is advisable to create a stable, accurate base with the first row of panels. For the panels placed subsequently, use the first row of panels on which small spacer pieces are placed along the line of the joint. Panel off-cuts can be used as spacer pieces, since their thickness corresponds with the joint width employed.

It is advisable to proceed panel per panel.

## **Visible Mechanical Attachment**

### **Overview**

This type of system utilizes decorative hardware for attaching the panels to the vertical substrate. This fabrication guide details installation methods for attaching to wood and aluminum substrates respectively.

Whether installing on wood or aluminum substrates, installation must take into account expansion and contraction of the panels. Two simple rules apply:

1. One fastener acts as a fixing point, which means the fastener used to hold the panel to the substrate and the hole in the Stratificato panel through which the fasteners passes are the same diameter (see Figure 1). The fixing point is located in the center of the.

All other fasteners are sliding points, which means the diameter of the fastener shank is less than the diameter of the hole through which it passes. This allows movement within the Stratificato panel, while securely holding the panel in place.

## Aluminum Substrate

### Parameters

1. Use a **stainless steel** (A2 or A4) 14mm pan head self-drilling screw with 5.5mm thread diameter and which accepts a Torx insert #20. Recommended length is 25mm and should allow for panel movement.
2. The diameter of the holes in the Stratificato panel are as follows:
  1. Sliding Point: Shaft diameter of the screw, plus 2mm.
  2. Fixed Point: 5.6mm.
3. In place of the screw described above, you may also use a **rivet** with stainless steel (A2 or A4) nail and 14mm aluminum head. The rivet should be installed using an adapted nose with a clearance of .3mm on the rivet pincer to allow for panel movement.
4. The diameter of the holes in the Stratificato panel are as follows:
  1. Sliding Point: Shaft diameter of the screw, plus 2mm.
  2. Fixed Point: 5mm.
5. The head of the screw or rivet must cover the entire hole diameter at maximum deflection.

## Wood Substrate

### Parameters

1. Use galvanized or stainless steel 12mm pan head wood screws, with 4.8mm thread diameter and which accepts Torx insert bit #20 Diameter of the holes in the Stratificato panel are as follows:
  1. Sliding Point: Shaft diameter of the screw, plus 2mm.
  2. Fixed Point: 5mm.

The head of the screw must cover the hole diameter at maximum panel deflection.