MEGANITE®

TECHNICAL BULLETINS

MEGANITE® MOVEMENT SERIES

DOCUMENT PURPOSE

This bulletin will offer best practices and design ideas to achieve the best possible appearance when fabricating Meganite's Movement Series designs. By utilizing these techniques and quality craftsmanship, a fabricator will be to provide the consumer inconspicuous seams and beautiful edge details.

** Drawings in this bulletin utilize a simulated vein pattern for instructional purposes.*

SETTING PROPER CUSTOMER EXPECTATIONS

Setting proper customer expectations is as important as proper fabrication, the following items are recommended to do this properly -

- Deck seam sample to show the customer, so they can have an expectation of how the deck seam will appear.
- Edge detail samples, stacked edge, mitered edge, drop edge.

Seam appearance and edge detail appearance are the responsibility of the fabricator, appearance is not warranted by Meganite Solid Surfaces.

ABOUT MEGANITE MOVEMENT SERIES

Meganite Movement Series is manufactured with a natural, random veining design that runs the length of the sheet and is directional and must be fabricated according to the direction of the veining.

Figure 1. Directional sheet of Meganite Movement's Mt. Vancouver

MEGANITE MOVEMENT FABRICATING TECHNIQUES

- **Cutting**

  It may be difficult to determine veining direction on smaller parts, it is suggested that you make multiple direction marks on the sheet before cutting the sheet into multiple parts.

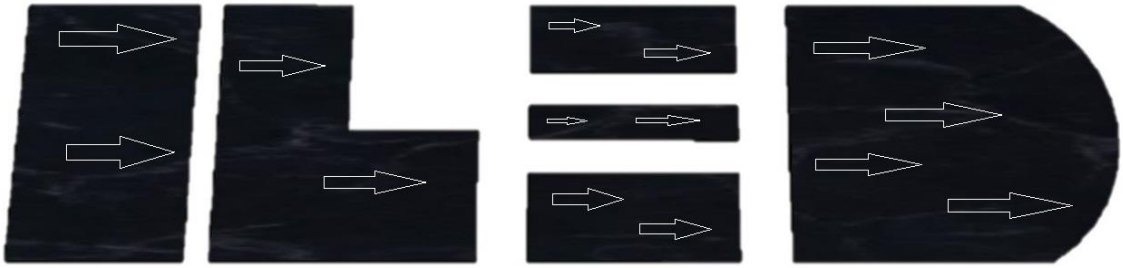

Figure 2. Directional marks on Meganite Movement before cutting parts

- **Meganite Movement Deck Seams**

  With proper technique and care, Meganite Movement Series deck seams can be created to have an inconspicuous appearance to satisfy your customer. Taking time to visually assess the pattern in the sheet, before cutting, will give you the best finished project.

  The following techniques are suggested for properly blending the veining, when creating an inside corner.

  Seam Placement -

  All seam locations must be chosen with great care and coincide with fabrication guidelines. Seams weaken the overall top structure, and should be limited in number and placed only in low stress locations.

  - Deck seams must be offset a minimum of 1 inch from inside corners.
  - Mitered inside corner seams in Meganite Movement Series colors are approved if a 6 inches' support strip is used. The 6 inches' support strip MUST fit against the backside of the inside corner block and be fully filled with adhesive, see **Figure 15.**
  - Seams must be at least 3 inches away from all cutouts, dishwashers or other heat producing appliances.

Seam Placement – (continued)

- Seams must not extend into cooktop cutouts
- A seam placed through an integral Meganite sink location is approved.
- All seams must be reinforced by 4 inches wide for straight seams, 6 inches on inside mitered seams.
- All seam supports must be adhered with solid surface seam.
- Adhesive, to the underside of the sheets. The seam support must run the entire length of the seam.

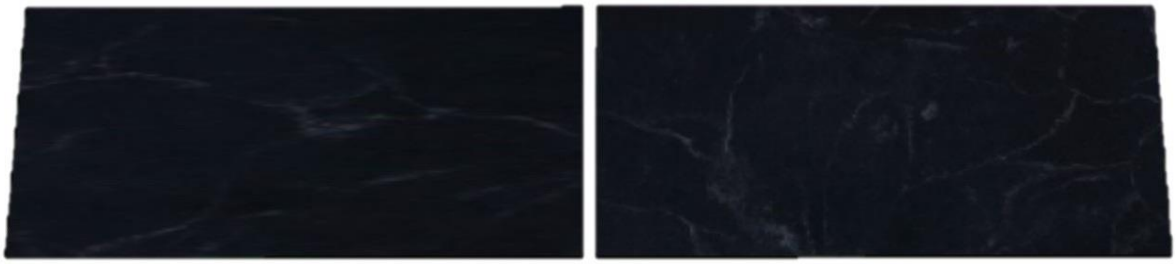

Figure 3. Meganite Movement Series sheets laid out for seaming

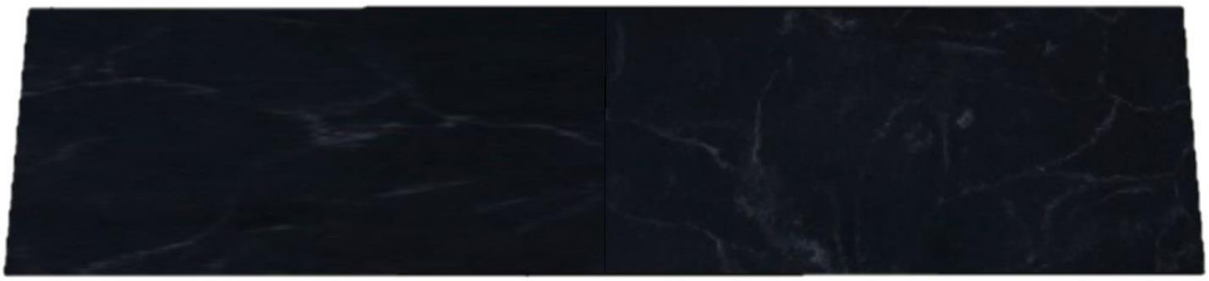

Figure 4. Meganite Movement Series sheets seamed together

- **Serpentine Deck Seam**

With the use of templates or CNC cutting, serpentine seams can help to achieve a seamless appearance, see **Figure 5** and **Figure 6** for details.

- **Serpentine Deck Seam** – (continued)

Figure 5. Serpentine deck seam

Figure 6. Template used to cut serpentine seam

- **Inside Corner** –

  Special reinforcement is required on inside corners because they are subject to higher stress than other areas. Finished inside corners must be routed to a minimum ½ inch radius (the larger the radius the better).

  ** One of the following reinforcement procedures must be used.*

- **Inside Corner** – (continued)

  - **Corner Block Method**

    Buildup pieces cut to a minimum size of 3” x 3” are sanded, glued and clamped to the underside of the countertop in the inside corner. This will form a square block that is then routed to the exact size of the inside corner.

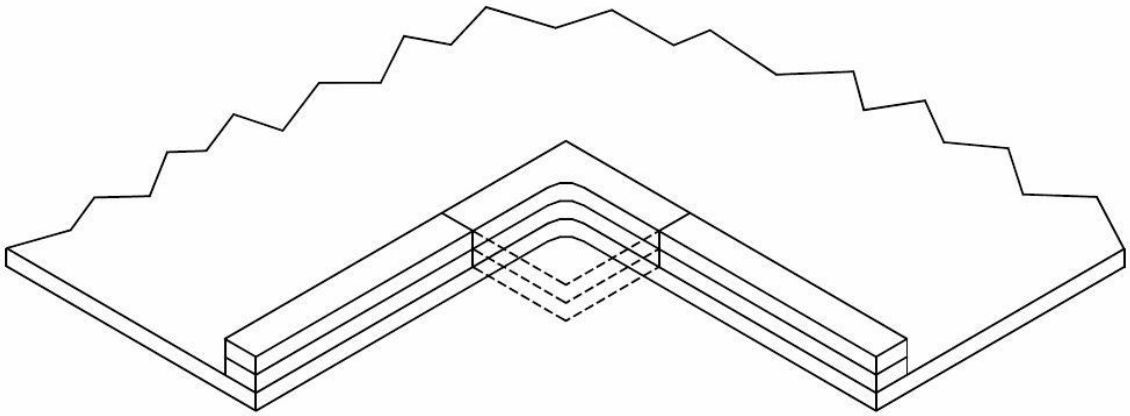

Figure 7. Corner Block Method shown from underside.

  - **Interlocking Corner Block Method**

    Corner block buildup pieces are aligned with seams offset by 1 inch. This method will provide greater strength.

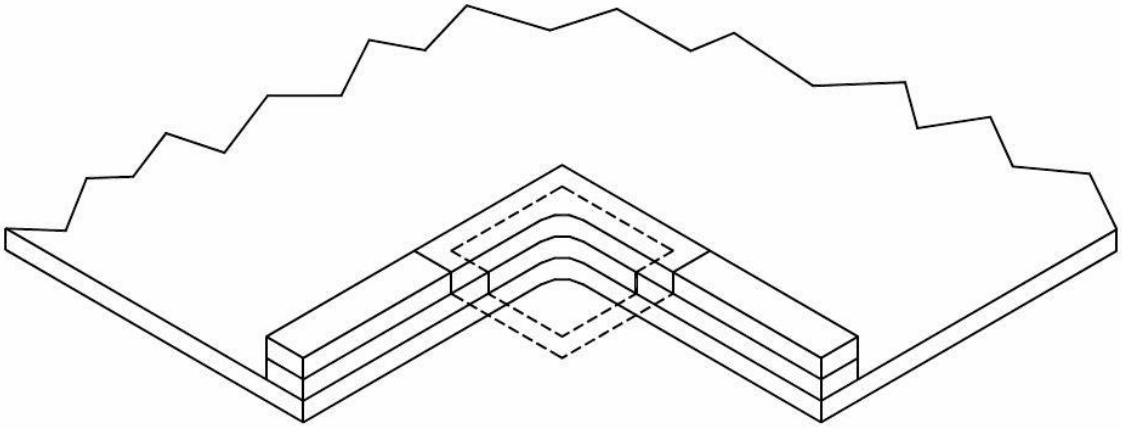

Figure 8. Interlocking Corner Block Method

- **Inside Corner** – (Continued)

  - **Vertical Strip Corner Block Method**

    The vertical strip corner block can be used with either the "stacking method" or the "on edge method". Pre-glue and square Meganite vertically to form the inside corner block. The block is then adhered to the underside of the countertop in the inside corner.

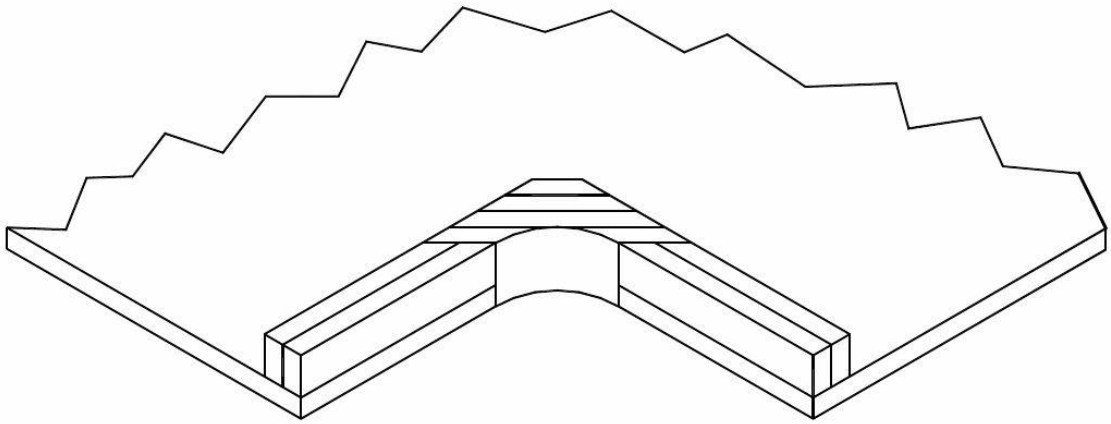

Figure 9. Vertical Strip Corner Block Method

- **Inside Corner Desk Seam-Offset** –

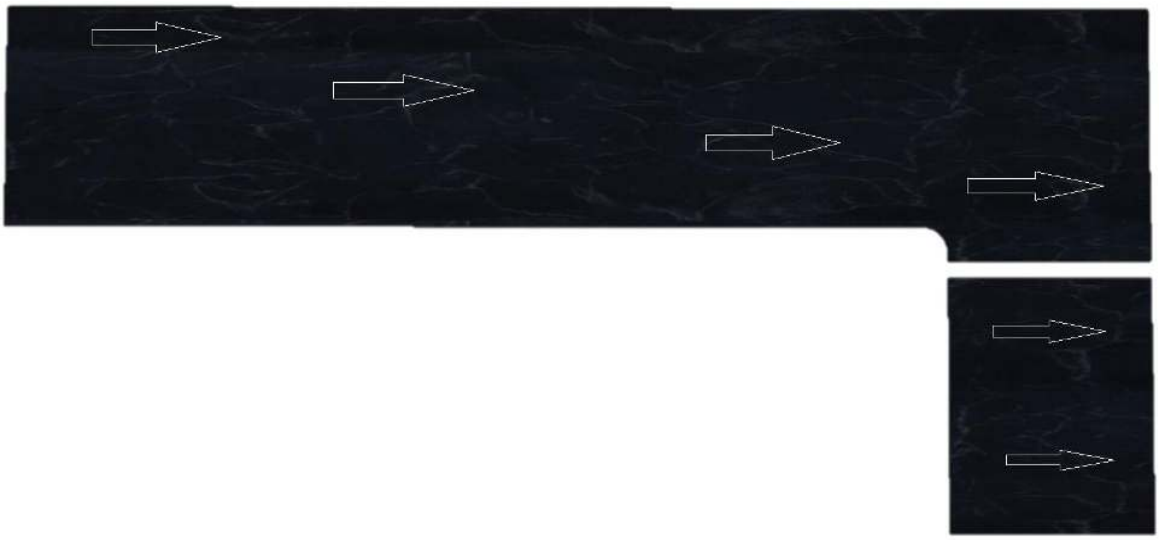

Figure 10. Offset inside corner laid out for seaming

- Inside Corner Deck Seams-Offset - (Continued)

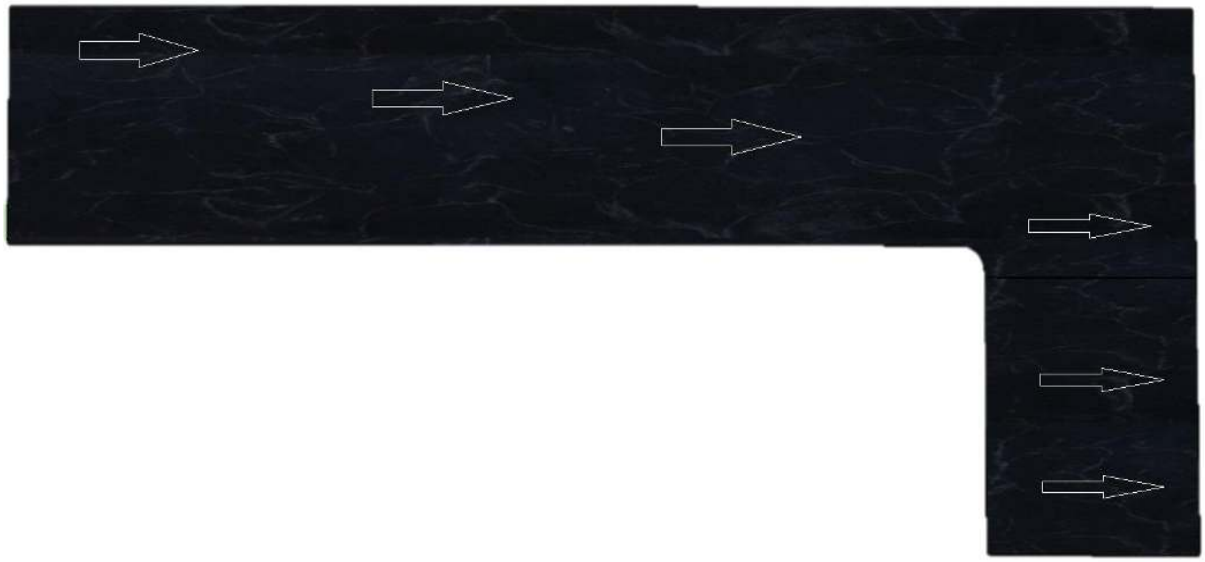

Figure 11. Offset corner seam pulled together

Figure 12. Meganite Movement Series pieces seamed with veining running in same direction, offset inside corner.

- **Inside Corner Deck Seams- Mitered**

  If running the sheets perpendicular, on an inside corner, the use of a mitered inside corner can help the veining have a nice flow from sheet to sheet.

  - **Miter Seams** on inside corners are approved with a full seam plate.
  - **Seam plates on mitered inside corner seams must be a minimum of 6 inches wide, 3 inches on each side of the seam** See **figure 15.**
  - **ALL** joints must be filled with adhesive, including the joints where seam plates butt to inside corner blocks.
  - **ALL** seam plates must be supported on both ends.
  - See **Figure 14 and 15** for inside corner block details.

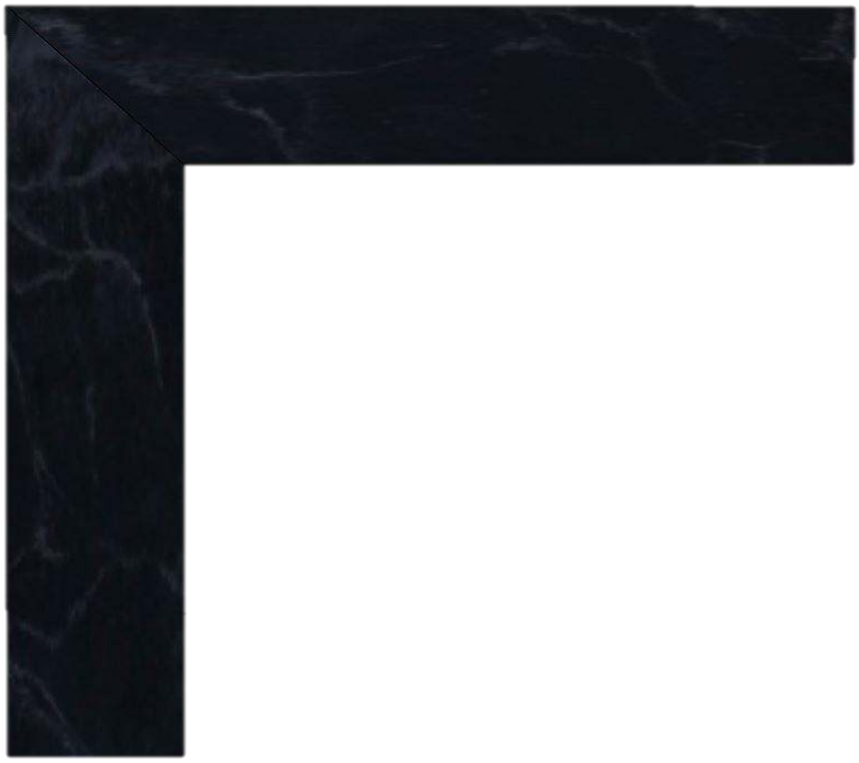

Figure 13. Mitered inside corner seam

- Inside Corner Deck Seams-Mitered - (continued)

Figure 14. Movement miter joint topside utilizing the "Interlocking Corner Block Method"

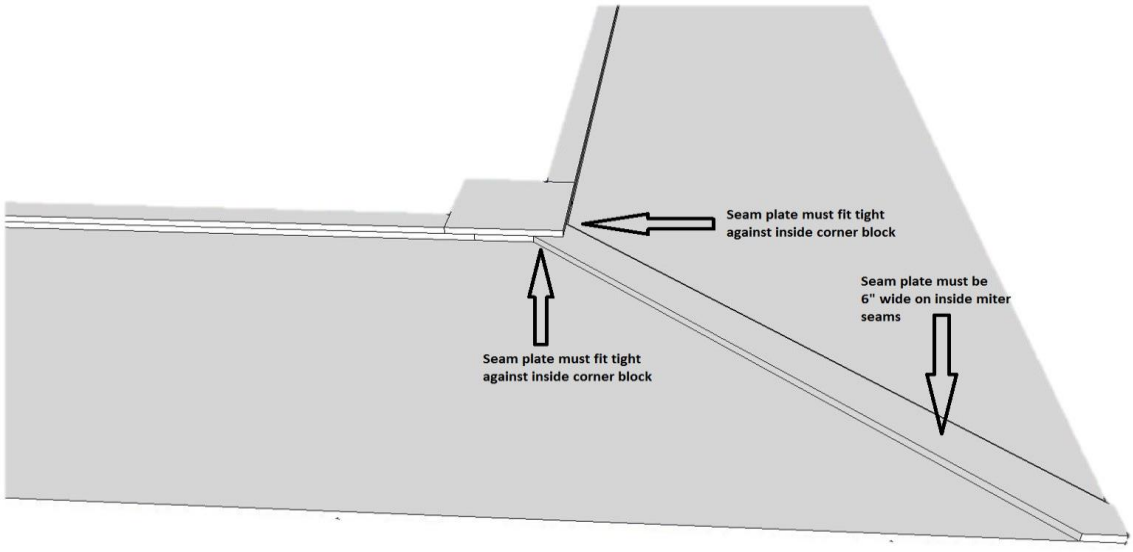

Figure 15. Movement miter seam shown from underside showing seam plate and inside corner block detail

- **Movement Series Edge Details** –

  With proper fabrication, Meganite Movement edge details can be fabricated to have a seamless appearance.

  The following edges are suggested and listed from best option to least favored option.

  - Best option - Miter/V-groove seam - **Figure 14**.

    Mitering the Meganite Movement Series material will give you the best flow and appearance on your edge treatment as it only shows the surface of the sheets at the glue line. By V-grooving or miter cutting the pieces you are keeping the original flow of the surface design/veining.

  - Least favorite option - Drop/Butt edge - **Figure 17**.

Figure 16. Best option - Miter / V-groove edge

- **Movement Series Edge Details - (Continued)**

  - Better option - Rabbeted drop edge - **Figure 15**.

    Cutting a ¼ inch rabbet in the underside of the deck, to receive the front edge, will minimize the amount of the sheet's edge that is exposed and will offer a good blending option for a drop edge.

Figure 17. Better option - Rabbet drop edge

  - Good option - Laminated/Stacked edge - **Figure 16**.

    Creating a laminated/stacked edge is acceptable but there will be difference between the edges of the sheet and the top surface of the sheet, both in the veining and light reflectivity.

    Routing a decorative profile into the edge can help to minimize the visual difference between the edge and the top surface.

- **Movement Series Edge Details - (Continued)**

Figure 18. Good option - Laminated / Stacked edge

Figure 19. Least favorite option - Drop edge, least favorite option.

- **Meganite Movement Series Integrated Backsplash**

  The following techniques are suggested to achieve the best appearance when fabricating integrated backsplashes.

  The following techniques are listed in order of best to least favorite.

  - Best Option - V-groove technique - **Figure 20 and 21.**
  - Good Option - Stacked technique - **Figure 22.**

Figure 20. V-groove technique folded together

Figure 21. V-Groove edge before gluing and folding

- Meganite Movement Series Integrated Backsplash – (Continued)

Figure 22. Stacked Integrated/Cove splash option

- **Thermoforming Meganite Movement Series**

  Meganite Movement Series, like any 100% acrylic solid surface, is thermoformable. Since environmental conditions change, a sample of the material should be tested before attempting to form the finished pieces. Variation in temperatures needed for forming between different solid surface colors is normal.

  - The use of an oven large enough to enclose the entire sheet of Meganite is essential. The entire piece must be heated. Spot heating will product stress points, leading to eventual cracking.
  - Never use a process such as a post-former or heat gun that will cause a temperature difference between heated and unheated areas of the sheet. This will cause a stress point to develop between the two areas and could lead to the material cracking.

- **Thermoforming Meganite Movement Series – (Continued)**

    - The use of smaller conventional ovens can work very well when heating smaller pieces such as edge buildup strips or corners.
    - The oven temperature should be between 300°F and 325°F. Heating times vary depending on the oven used and the size of material but usually range from 30-60 minutes.
    - Test the oven using a small test piece before heating the actual sheet for the job.
    - Before attempting to bend the Meganite, make sure it has been heated throughout the thickness of the material to a temperature between 275° and 325°.
    - Overheating may blister, crack or whiten the material.
    - Attempting to bend the material at lower temperatures will crack or whiten the area and cause a stress point.
    - Meganite Movement Series has a minimum bending radius of 3 inches.
    - Meganite does not warranty any material that has been thermoformed.

- **Finishing Meganite Movement Series**

There are three basic finishes for solid surface materials. Each finish has different properties as well as levels of maintenance that should be taken into consideration for each specific application.

- Matte Finish - a softer finish that is the easiest to maintain.
- Semi-Gloss Finish - a medium finish that enhances the appearance of dark solids and patterns but is more difficult to maintain.
- High-Gloss Finish - a polished finish that enhances the visual depth and beauty of the material (not recommended for countertops or other high use areas, as this finish is the most difficult to maintain).

Orbital Sanding

- Move the sander in a left to right direction, overlapping each pass by about one-third. Sand slowly at an even pace and never in a circular motion as this can create a low area in the surface.
- Follow by sanding in a front to back motion and then by sanding at a diagonal in both directions always overlapping each pass by at least one-third.

Orbital Sanding – (Continued)

- Clean the area and repeat these steps using the next abrasive level.
- For edge sanding, remove the abrasive from the pad and hand sand using all the abrasive levels.

Abrasives

- We recommend using 3M Microfinishing or 3M Trizact® sanding abrasives. They usually have tighter control of particulate size and shape, resulting in fewer deep scratches and a better overall finish.
- Refer to the chart of standard finishing steps on the following page for the abrasives needed to achieve the desired finish.
- Use a random orbital pneumatic or electric sander, wet or dry, per 3M specifications.

CAUTION: Do not use electric powered sanders for wet sanding.

Finishing Steps

- 3M Microfinishing Abrasives

Matte Finish

STEP 1 366L 100 micron
STEP 2 366L 80 micron
STEP 3 366L 60 micron
STEP 4 7447B Scotch-Brite® pad

Semi-Gloss Finish

STEP 1 366L 100 micron
STEP 2 366L 80 micron
STEP 3 366L 60 micron
STEP 4 366L 30 micron
STEP 5 7448B Scotch-Brite® pad

High-Gloss Finish

STEP 1 366L 100 micron
STEP 2 366L 80 micron
STEP 3 366L 60 micron
STEP 4 366L 30 micron
STEP 5 366L 15 micron
STEP 6 3M Compounding Material Use a low-speed buffer and a white pad
STEP 7 3M Finishing Material Use a low-speed buffer and a yellow pad

- 3M Trizact® Film Abrasives

Matte Finish

OPTIONAL PRE-STEP 366L 100 micron If necessary to level rough surface
STEP 1 268XA A35 Use dry *or* with a light to medium water mist
OPTIONAL FINISH STEP 268XA A10 *or* Use with a light to medium water mist
7447B Scotch-Brite® pad

Semi-Gloss Finish

OPTIONAL PRE-STEP 366L 100 micron If necessary to level rough surface
STEP 1 268XA A35 Use dry *or* with light to medium water mist
STEP 2 268XA A10 Use with a light to medium water mist
OPTIONAL FINISH STEP 268XA A5 *or* Use with a light to medium water mist
7447B Scotch-Brite® pad

High-Gloss Finish

OPTIONAL PRE-STEP 366L 100 micron If necessary to level rough surface
STEP 1 268XA A35 Use dry *or* with a light to medium water mist
STEP 2 268XA A10 Use with a light to medium water mist
STEP 3 268XA A5 Use with a light to medium water mist
STEP 4 568 XA Use with a medium to heavy water mist

- **Polishing Techniques**

When used in an appropriate application (vertical or decorative surfaces only), a high polished finish can be very pleasing. **The end user should be advised of the special care and attention needed to maintain this high gloss finish.**

- Complete 3M micro finishing steps for a matte finish, but do not use the gray Scotch-Brite® pad.
- Re-sand the area using 15 micron abrasive and clean thoroughly.
- Follow with polishing compound using a low-speed polisher and buffing pad.
- Apply 3M Finesse-it™ Compounding Material (Aetna Product Code #7569030) to the surface and work with the #05712 3M Hookit™ II SBS Compound Pad (off-white).
- Remove any excess compound and clean with a damp cloth.
- Apply 3M Finesse-it™ Finishing Material (Aetna Product Code #7569024) to the surface and buff with the #05713 3M Hookit™ II SBS Compounding Pad (yellow).
- Polishing compounds must be washed away thoroughly and are not food-safe.

- Mirka Abrasives® recommended process –

Matte Finish

Use the following grits of Abranet®, finish with Abralon®
STEP 1 P120
STEP 2 P180
STEP 3 P320
STEP 4 P500
STEP 5 Abralon® P360

Satin Finish

Use the following grits of Abranet®, finish with Abralon®
STEP 1 P120
STEP 2 P180
STEP 3 P320
STEP 4 P500
STEP 5 Abralon® P500

High Gloss Finish 1

Use the following grits of Abranet®, finish with Abralon®
STEP 1 P120
STEP 2 P180
STEP 3 P320
STEP 4 P500
STEP 5 P800
STEP 6 Abralon® P2000
STEP 7 Abralon® P4000

High Gloss Finish 2

Use the following grits of Abranet®, continue with Polarstar® and Abralon®, finish by polishing with Polarshine 10® and lamb's wool.
STEP 1 P120
STEP 2 P180
STEP 3 P320
STEP 4 P500
STEP 5 P800
STEP 6 Polarstar® P1500
STEP 7 P3000
STEP 8 Polish with lamb's wool and Polarshine 10®

IF YOU HAVE QUESTIONS, PLEASE CONTACT MEGANITE SOLID SURFACE REPRESENTATIVES, AUTHORIZED FABRICATORS, DISTRIBUTORS OR EMAIL US AT INFO@MEGANITE.COM.

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