



# 1" Performance UltraTile® TECHNICAL MANUAL

Installation · Maintenance · Warranty

Manufactured in the U.S.A. by:



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Supersedes all previous versions.  
Check website for updates.

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**I. SURFACES & METHODS**

INTERIOR INSTALLATION			EXTERIOR INSTALLATION		
24" x 24" x 1"	Method		24" x 24" x 1"	Method	
Surface	Quad Blok only	Quad Blok +Full Glue <sup>2</sup>	Surface	Quad Blok only	Quad Blok +Full Glue <sup>2</sup>
QTscu Sound Control Underlayment <sup>1</sup>	Approved	Approved	QTscu Sound Control Underlayment <sup>1</sup>	<b>Not Approved</b>	<b>Not Approved</b>
Concrete Pad	Approved	Approved	Concrete Pad		Approved
Concrete Paver	Approved	Approved	Concrete Paver		<b>Not Approved</b>
Asphalt	Approved	Approved	Asphalt		Approved
Plywood	Approved	Approved	Plywood		<b>Not Approved</b>
Compact Gravel	<b>Not Approved</b>	<b>Not Approved</b>	Compact Gravel		<b>Not Approved</b>
Wood or Tile	Approved	<b>Bond test<sup>2</sup></b>	Wood or Tile		<b>Not Approved</b>
Resilient Flooring	Approved	<b>Bond test<sup>2</sup></b>	Resilient Flooring		<b>Not Approved</b>
Carpet	<b>Not Approved</b>	<b>Not Approved</b>	Carpet		<b>Not Approved</b>
			Roofing		<b>Not Approved</b>

1. QTscu Sound Control Underlayment must be installed per applicable technical manual and fully-adhered with E-Grip III  
 2. "Full Glue" requires full spread adhesive using 1/8" square notch trowel. Bond test is recommended; installer responsible to determine suitability  
 Note: Bond test recommended for all approved surfaces. Installer responsible to determine suitability.

**II. TOOLS / MATERIALS REQUIRED**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Two tape measures - 25' and 50'</li> <li>2. Chalk line - white only!</li> <li>3. Saber saw (Jig saw) or band saw</li> <li>4. Blades for saber saw (7-10 teeth per inch, wood type)</li> <li>5. Utility knife with heavy-duty blades</li> <li>6. Framing square/metal straight edge</li> <li>7. Silver or gold color paint pencils</li> <li>8. Standard size caulk gun</li> <li>9. 4" slot blade screwdriver</li> <li>10. Notched trowel -1/8" square notch</li> <li>11. Safety glasses</li> <li>12. 1-1/2" flexible putty knife</li> </ol> | <ol style="list-style-type: none"> <li>13. Coveralls</li> <li>14. Kneepads</li> <li>15. Solvent-safe rubber gloves</li> <li>16. Rags</li> <li>17. Trash bags</li> <li>18. Push broom or shop vac</li> <li>19. Mineral spirits</li> <li>20. Installation instructions</li> <li>21. String line</li> <li>22. Cutting table (shipping pallet)</li> <li>23. Dustpan</li> <li>24. 2-3 lb. sledge hammer or rubber mallet</li> <li>25. 2'x 4' to use as tapping block</li> <li>26. 75-100 pound three section floor roller</li> </ol> |
|--|---|

**III. SITE WORK**

**NOTE:** Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. From time to time during installation, it may be necessary to measure and hand select tiles to ensure course lines remain straight. Additionally, color tone and shading may vary to the extent that some hand selection is required to maintain maximum uniformity throughout the site.

- A. Site Elevation
  - 1. On grade installation - The finished installed height of the tile surface will be equal to or slightly higher than the perimeter grade.
  - 2. Above grade installation - The finished installed height of the tile surface will usually require the use of perimeter reducers to transition to floor elevation unless installation terminates at a wall.
  - 3. Tiles must be fully supported by the substrate. Substrate irregularities, unevenness, roughness, etc. should not be apparent after tile installation.
- B. Site Slope/Drainage
  - 1. When preparing a new hard base, if applicable, a minimum slope equal to 1 in. per 8 ft. of run shall be applied to the finished surface with slope toward the drain basin and drain trough or down-grade side of the site.
  - 2. An acceptable drainage system needs to be put in place to eliminate standing water.

**IV. BASE OPTIONS**

- A. Hard Base Construction
  - 1. Concrete Base:
    - a. Concrete shall have a minimum compressive strength of 3000 psi. New concrete slabs should cure for a minimum of 28 days. It must be fully cured and permanently dried. Care should be taken to provide for the stated slope. The surface should be flat to the equivalent of 3/16" (4.8 mm) in 10' (3.0 m). A light broom finish is best for maximum adhesion of the Tile.
  - 2. Paved Asphalt Base:
    - a. Use a coarse asphalt aggregate mixture; the preferred aggregate size for the adhered system is 3/8" to 1/2". Do not use asphalt mixtures with a high percentage of fines; they may become less stable hot weather and may become soft enough to allow the tiles to slide in high use areas.
    - b. The soil sub-grade must be compacted with a minimum of two passes using a 10-ton vibratory roller with no soft or moving areas upon completion. The crushed stone base must also be compacted with a minimum of two passes using a 10-ton vibratory roller. The binder and wear courses of the asphalt must both meet 95% of the theoretical maximum density of the Job Mix Formula.

Total Passing Sieve	Percent by Weight
1/2"	100
3/8"	80-100
#4	45-90
#8	30-65
#50	5-25
#200	2-8
Asphalt Cement	6-8

- c. New asphalt should be allowed to cure for 28 days before adhering UltraTile.

**V. MATERIAL STORAGE AND HANDLING**

- A. Deliver the material to the job site in its original unopened packaging with all labels intact and stored appropriately inside to prevent damage.

- B. Inspect all material for visual defects before beginning the installation. Verify the material delivered is the correct type, thickness, and amount. Report any discrepancies immediately. Ecore will honor no labor claim on material installed with any visually apparent defects.
- C. The material and any adhesive must be acclimated at room temperature for a minimum of 48 hours before starting the installation.

## VI. INSTALLATION

- A. UltraTile may be installed over most concrete, wood, or tile which is level, in good condition, and clear of dirt and loose debris.
- B. Installation should not begin until all other trades are finished in the area.
- C. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65° F for 48 hours before, during, and after the installation.
- D. For installations requiring adhesion to concrete, Moisture must be measured using the RH Relative Humidity test method per the ASTM F2170 test standard. Moisture content should not exceed the allowable limit of the selected Ecore adhesive.
  - 1. E-Grip III – RH limit of 85% – normally selected
  - 2. E-Grip 95 – RH limit of 95% – higher RH applications
  - 3. E-Grip 99 – RH limit of 99% – highest RH applications

If RH levels exceed the selected Ecore adhesive's RH limit, stop and correct situation.

- E. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.
- F. For installations requiring adhesion to concrete, pH tests must be and be within the allowable limits of the selected Ecore adhesive. If the pH is greater, it must be neutralized prior to beginning installation.

**NOTE:** Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. It may be necessary during installation to measure and hand select tiles to ensure course lines remain straight. Color-tone and shading may vary, and some hand selection maybe required to maintain maximum uniformity throughout site. Tiles should be inspected from several angles and adjusted as necessary.

**NOTE: Slight variance in shade and color chip dispersion is normal. It is the installer's responsibility to inspect all products to insure the correct style, thickness, and color. Any moderate to severe discrepancies should be reported immediately before beginning the installation. No labor claims can be paid on material installed with visual defects.**

## VII. SITE LAYOUT

- A. Sweep area clear of all dust and loose debris.
- B. Determine a starting point for the first course of tile to best suit the site area. Because most walls are not straight or corners square, tile installations generally start in the middle of the room, so measure the width and length of the space, divide the room into 4 equal quadrants and snap chalk lines that are perpendicular (90 degrees) to each other.
- C. Place the first tile's edges where the two perpendicular chalk lines meet.

Hint: Adjust the starting point to balance the tiles side-to-side and not end up with small cuts of tile against the walls.

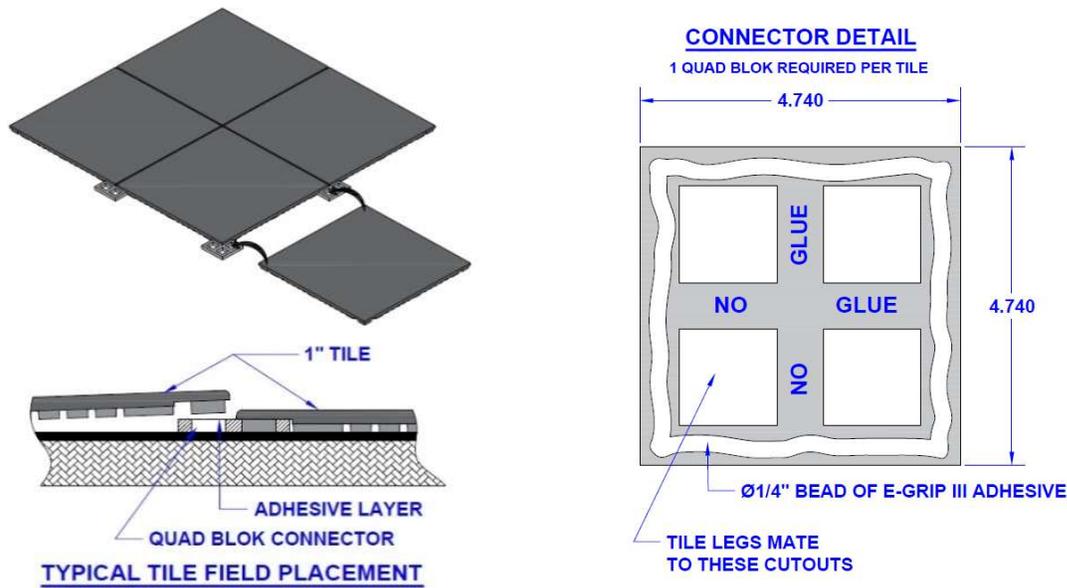
- D. It is important to start the installation from a perfectly straight chalk line or attached channel or timber.

**VIII. QUAD BLOK INSTALLATION (ALWAYS Required)**

- A. Follow the Site Layout instructions to prepare the area for the installation of the 1” tiles.
- B. Once chalk lines are established, place the first tile at the intersection of two chalk lines, aligning adjacent edges of the tile with the chalk lines.
- C. Apply a continuous 1/4” diameter bead of E-Grip III adhesive around the perimeter of the Quad Blok connectors. Working adhesive time is dependent upon environmental conditions. See NO GLUE zones in Connector Detail drawing below.
- D. Fit the first tile with four prepared Quad Blok connectors by lifting each tile corner slightly, sliding the connectors under each corner and engaging the four corner legs of each tile with the respective apertures in the Quad Blok. Continue to sequentially lay the tile and to set the Quad Blok connectors along one chalk line until the first course of tile is complete.

**NOTE: Cut the Quad Blok connectors in half to secure full perimeter tiles**

- E. Complete the other three quadrants in a similar fashion.
- F. Roll with a 75–100 pound flooring roller after gluing tiles into Quad Bloks. Roll again 1 hour later.
- G. Allow 24 hours for adhesive to cure before opening area for foot traffic, 48 hours for heavy loads and 72 hours before placing equipment.
- H. One 10.1 ounce tube of E-Grip III is required for approx. 15 of the Quad Bloks.



Note: Adhesive spills must be removed while still wet. Use a dry rag to pick up the majority of the adhesive. Wipe the remaining residue with a rag dampened with mineral spirits, followed by a rag damp with water to remove the mineral spirits. Cured adhesive can only be removed from surfaces by mechanical means, such as scraping or sanding.

**IX. FITTING AND CUTTING TILES AND ADHERING THE PERIMTER COURSE**

- A. Tiles installed against a wall will most likely have to be cut to fit. Use a heavy-duty utility knife and a straight edge. A saber saw with a coarse 7-10 TPI wood cutting blade, variable speed and orbital

settings also works well. A cutting table to support the work is required during cutting; a standard shipping pallet can be pressed into service as a cutting table.

- B. **DO NOT leave a cut edge of a tile exposed to foot traffic.** Any tile that has its factory molded, radius edge removed for any reason should be backed along that edge using a 1" masonry or timber edging, unless that edge is to be placed against a wall or other vertical member.
- C. If the tile is being installed wall-to-wall, the perimeter tiles **are also** installed with Quad Bloks connecting the perimeter tiles to the interior tiles, with the walls serving to contain the perimeter row of tile. Any perimeter tiles that are not contained by walls, such as at a doorway, or in a free-standing or "area rug" configuration, should be adhered to the substrate. Ramps will be adhered as well and provide a transition from the tile to the original floor level. The perimeter tiles and ramps must be adhered using Ecore's E-Grip III adhesive with a 1/8" square-notched trowel.
- D. Once tiles are laid into the wet adhesive, roll the floor with a 75-100-pound flooring roller. Adhesive should be allowed to cure for 24 hours before walking on the tile.

## X. FITTING, CUTTING AND ADHERING RAMPS & TRANSITIONS

- A. Cut in the same way as the tiles. Corners should be miter cut.
- B. The most accurate cuts are made using a heavy-duty utility or carpet knife and a straight edge. A saber saw utilizing a 7-10 TPI wood cutting blade also does an acceptable job, especially for radius or free-form cuts. A saw with a 3-3.5 amp rated motor having a 1" stroke with variable orbital setting will produce the best results. A cutting table used to support the work is required during cutting. A standard shipping pallet works well.
- C. Cut away any protruding Quad Blok material
- D. Make sure that the subfloor is flat, clean, dry and free of contaminants such as waxes, finishes, sealers, or other extraneous materials that would prevent a good adhesive bond.
- E. Unpack the materials and allow them to sit in the area to be installed. Materials and adhesive must be acclimated at a uniform room temperature for a minimum of 48 hours prior to installation. Dry lay and make appropriate cuts before opening the adhesive.

**Note:** The toe edge of the ADA ramp contains a wire reinforcement material. Take care not to bend the edges as it will be difficult to get ramps with bent reinforcement to lay flat.

- F. Mark the areas where adhesive is to be applied and temporarily remove the ramps / transition.
- G. Spread E-Grip III urethane adhesive using a 1/8" square notch trowel. Do not spread more adhesive than can be covered in 30 minutes.
- H. Carefully place the ramps into the adhesive. Be sure to press down firmly to assure proper adhesive transfer to the back side of the ramp and roll with a 75-100 pound three sectional flooring roller.
- I. Use weight to evenly hold down the entire ramp / transition.

**Note:** Weight the entire toe edge of ADA transition to prevent it from lifting out of the adhesive.

**Note:** Adhesive spills must be removed **while still wet**. Use a dry rag to pick up the majority of the adhesive. Wipe the remaining residue with a rag dampened with mineral spirits, followed by a rag dampened with water. Cured adhesive can only be removed from surfaces by mechanical means, such as scraping or sanding.

- J. After 24 hours, remove the weight.
- K. Clean and maintain the area in accordance with the instructions in the Maintenance Section below.

**XI. FULLY ADHERED INSTALLATION – Mandatory for exterior installations**

- A. Follow the site layout instructions to prepare the site area for installation. The tiles, accessories, and substrates should be weather tight and maintained at a minimum uniform temperature of 65°F (18°C) for 48 hours before, during, and after the installation.

**NOTE: Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. From time to time during installation, it may be necessary to measure and hand select tiles to ensure that course lines remain straight. Additionally, color tone and shading may vary to the extent that some hand selection is required to maintain maximum uniformity throughout the site.**

As with any flooring product, dry laying and full inspection of all tiles will allow for a quality installation. Tiles should be inspected from several angles and adjusted as necessary.

**NOTE: UltraTile is manufactured from recycled materials and slight variance in shade and color chip dispersion is normal. It is the installer's responsibility to inspect all products to insure the correct style, thickness, and color. Any moderate to severe discrepancies should be reported immediately before beginning the installation.**

NOTE: Use a 1/8" square notch trowel. Coverage rates for the E-Grip III adhesive are approximately 60 square foot per gallon using a 1/8" square notch trowel.

- B. For an interior installation, Moisture must be measured using the RH Relative Humidity test method per the ASTM F2170 test standard. Moisture content should not exceed the allowable limit of the selected Ecore adhesive.
1. E-Grip III – RH limit of 85% – normally selected
  2. E-Grip 95 – RH limit of 95% – higher RH applications
  3. E-Grip 99 – RH limit of 99% – highest RH applications

If RH levels exceed the selected Ecore adhesive's RH limit, stop and correct situation.

- C. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.
- D. It is essential that pH tests be taken on all concrete floors. If the pH is greater than 9, it must be neutralized prior to beginning the installation.
- E. Using a 1/8" square notch trowel, apply the selected adhesive out slightly wider than the tile being placed. Do not spread more adhesive than can be covered in 30 minutes.
- F. **Quad Bloks must be used and installed per Quad Blok installation section above.**
- G. Place tiles with Quad Bloks into the fresh adhesive bed following pre-established course lines. If applicable, place ramps / transitions into the fresh adhesive in a similar manner.
- H. After placing tiles into adhesive bed, roll the tiles with a 75-pound three section flooring roller to ensure adhesive transfer to the back of the tile feet.
- I. Adhesive should be allowed to cure for 24 hours before allowing foot traffic. All heavy traffic and/or light rolling loads should be avoided for a minimum of 72 hours after installation to allow adhesive to develop strength.
- J. Tile cuts are typically laid out by referencing dimensions from the edges of the tiles, already in position, to a wall or other obstruction along or around which the tiles are to fit. These dimensions are then transferred to and laid out on the tile to be cut.

K. Corner ramps should be miter cut.

**Maintenance**

**It is the Specifier’s responsibility to:**

- Mandate covering and protection of floor from damage and construction debris until construction is complete.
- Assign to the appropriate party responsibility for the initial cleaning of floor following published procedures.

Ecore recommends our environmentally friendly line of maintenance products, including E-Cleaner.

**It is the General Contractor’s responsibility to provide:**

- A building or installation area that is fully enclosed from the elements, e.g., finished roof, windows, doors, etc.
- Temperature that is climate controlled with a minimum uniform temperature of 65° F for 48 hours prior to, during, and after the flooring installation, for acclimation of flooring materials.
- Protection for those areas of the flooring that are subject to direct sunlight through doors or windows by having the doors or windows covered for such time until the installation of the material is complete.
- Protection for flooring from damage and construction debris by using an appropriate floor covering until such time that the recommended initial cleaning may be performed.

Steps	Cleaning Product	Mixture	Equipment
Initial Cleaning	Ecore’s E-Cleaner	10 oz. /gal. water	Soft Nylon Brush or 3M 5100 Red Pad or equal
Daily Cleaning	Ecore’s E-Cleaner	2-4 oz. /gal. water	Microfiber Mop, Soft Nylon Brush or 3M 5100 Red Pad or equal
Heavy Soil & Restorative Cleaning	Ecore’s E-Cleaner or E-Strip	10 oz. /gal. water 16 oz. /gal. water	Soft Nylon Brush or 3M Blue 5300, Brown 7100 stripper pad, or Black 7200 stripper pad as req’d. (Do <b>not</b> use High Productivity Pad)

**CLEANING PROCEDURES**

1. Initial Cleaning
  - a. Remove surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming.
  - b. Scrub floor with Ecore’s E-Cleaner diluted 10 oz. /gal. water, using a low speed scrubber or auto scrubber with a soft nylon brush or pad per table above. Avoid flooding floor.
  - c. Pick up solution with wet vacuum. Rinse with clean water and pick up rinse water with a wet vacuum or auto scrubber. Allow tiles to dry thoroughly (6-8 hours).
  
2. Daily/Regular Cleaning
  - a. Remove surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming.
  - b. Scrub floor with Ecore’s E-Cleaner diluted 2-4 oz. /gal. water, using a low speed scrubber or auto scrubber with a soft nylon brush or pad per table above. Avoid flooding floor.

- c. Pick up solution with wet vacuum. Rinse with clean water and pick up rinse water with a wet vacuum or auto scrubber. Allow tiles to dry thoroughly (6-8 hours).
3. Heavy Soil
    - a. Remove surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming.
    - b. Scrub floor with Ecore's E-Cleaner diluted 10 oz. /gal. water, using a low speed scrubber or auto scrubber with a soft nylon brush or pad per table above. Avoid flooding floor.
    - c. Pick up solution with wet vacuum. Rinse with clean water and pick up rinse water with a wet vacuum or auto scrubber. Allow tiles to dry thoroughly (6-8 hours).
  4. Restorative Maintenance
    - a. Remove surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming.
    - b. SLOWLY scrub floor with E-Strip diluted 16 oz. /gal. water, using a low speed scrubber or auto scrubber with a stripper pad per table above. Avoid flooding floor.
    - c. Vacuum soiled solution with a wet/dry vacuum.
    - d. Pick up solution with wet vacuum. Rinse with clean water and pick up rinse water with a wet vacuum or auto scrubber. Allow tiles to dry thoroughly (6-8 hours).

## Warranty

Ecore warrants that the Performance UltraTile will be free from defects in materials and workmanship, that surface wear due to ordinary abrasion from pedestrian traffic will not penetrate the wear course of the surface, and that, when installed according to the manufacturer's specifications, the surface remains fixed and functional. If found to be defective under normal non-abusive conditions, at the discretion of Ecore, the sole remedy against the seller will be to repair, to replace, or to issue a credit not exceeding the selling price of the defective goods. These warranties only apply to the original purchaser.

Please see the Ecore Warranty Guide for length specifics.

This warranty shall not cover dissatisfaction due to improper installation, normal wear or quality of installation expected from the use or environment of installation, damage from improper maintenance or usage, or general misuse, including and without limitation: burns, cuts, tears, scratches, scuffs, damage from rolling loads, damage from cleaning products not recommended by Ecore, slight shade variations or shade variations due to exposure to direct sunlight, or differences in color between samples or photographs and actual flooring.

### Excluded from Warranty

These warranties do not apply to the following:

1. The exact matching of shade, color, or mottling.
2. Any express or implied promise made by any salesperson or representative.
3. Tears, burns, cuts or damage due to improper installation, improper use or improper cleaning agents or maintenance methods.
4. Wear from chairs or other furniture without proper floor protectors will void the warranty. Care should be taken to protect the flooring from damage by using good quality protective feet for chairs, tables, and other furniture. Chair mats may be required under chairs with casters/wheels.
5. Labor costs for installation of original or replacement material.

6. Sale of “Remnants”, “Seconds”, “Off Goods” or other irregular (non-first quality) flooring materials. With respect to “Seconds”, “Off Goods”, or “Remnants” such are sold “as is,” and Ecore makes no warranties whatsoever, express or implied with respect thereto, including warranties of merchantability or fitness for a particular purpose.
7. Problems caused by moisture, hydrostatic pressure, or alkali in the sub-floor.
8. Problems caused by uses, maintenance, and installation that are contrary to Ecore specifications, recommendations, or instructions.
9. Material installed with obvious defects.
10. Damage to flooring products from high heels or spike heels.
11. Damage to flooring products from rubber mats, rubber-backed mats or vehicle tires.
12. Installation with adhesives other than those recommended by Ecore.
13. Fading and/or discoloration resulting from heavy sunlight penetration and ultraviolet ray exposure from direct or glass-filtered sunlight.
14. Material that is not installed and maintained as recommended by Ecore.
15. Damage to flooring products from pallet jack and tow-motor traffic.
16. Environments where the product will be exposed to animal fats, vegetable oils, grease or petroleum-based materials. (i.e.: commercial kitchens our auto repair facilities.)
17. Premature wear and deterioration from spikes and skate blade exposure.
18. Differences in color between products and photography.
19. Embossing / density deviations between product and samples, photography.

This warranty is in lieu of any other warranty, whether expressed or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. Ecore shall not be liable for incidental or consequential losses, damages or expenses directly or indirectly arising from the sale, handling, or use of the materials (goods), or from any other cause relating thereto. For complete and latest warranty information, please visit [www.ecoreintl.com](http://www.ecoreintl.com)



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**Manufactured in the U.S.A.**

**715 Fountain Ave – Lancaster, PA 17601**

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