

SECTION 07 46 00

RAINSCREEN DRAINAGE MAT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wall moisture/vapor drainage mat.

1.2 RELATED SECTIONS

- A. Section 04 20 00 – Clay Unit Masonry: Cavity wall construction of brick veneer.
- B. Section 04 40 00 – Stone Masonry: Wall construction of stone veneer.
- C. Section 04 70 00 – Manufactured Masonry: Wall construction of manufactured masonry veneer.
- D. Section 07 46 00 – Siding: Wall construction of siding veneers.
- E. Section 09 24 23 – Portland Cement Stucco: Wall construction of stucco.

1.3 REFERENCES

- A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. ASTM E 2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.
- C. UL Fire Resistance Rated

***NOTE TO SPECIFIER** FOR UL RATED WALL ASSEMBLIES WITH DRIWALL
RAINSCREEN PLEASE SEE MANUFACTURER.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 2 years production of similar products.
- B. Installer Qualifications: Experience with installation of similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Keene Building Products; PO Box 241353, Mayfield Heights, Ohio 44124. Toll Free Tel: (877) 514-5336, Tel: (440) 605-1020. Fax: (440) 605-1120. Email: info@keeneBuilding.com. Web: http://www.KeeneBuilding.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

2.2 DRAINAGE MAT

**** NOTE TO SPECIFIER **** DRIWALL RAINSCREEN 020-1 IS A NOMINAL 0.25 INCH (6 MM) THICK, RANDOMLY ORIENTED GEOMETRIC PATTERNED DRAINAGE AND VENTILATION MAT. IT IS DESIGNED TO ELIMINATE MOISTURE AND MOISTURE VAPOR IN STUCCO, THIN STONE, MANUFACTURED STONE, SIDING AND BRICK OR STONE MASONRY APPLICATIONS. DRIWALL RAINSCREEN IS PRODUCED FROM AN EXTRUDED POLYMER MATRIX OF ENTANGLED MONOFILAMENTS. THE THREE-DIMENSIONAL MAT IS HEAT LAMINATED TO A NON-WOVEN LIGHTWEIGHT, BREATHABLE FABRIC TO PROVIDE A SEPARATION FROM CEMENTATIONS VENEERS. THE MONOFILAMENTS ARE HEAT WELDED AT THE JUNCTIONS TO FORM A RESILIENT STRUCTURE THAT SPACES THE VENEER AWAY FROM THE INNER SHEATHING. THE PRODUCT IS USEFUL IN CAVITY WALL DESIGNS AND RAINSCREEN SYSTEMS WHERE AN AIR SPACE IS NEEDED FOR DRAINAGE AND VENTILATION. WHEN DRIWALL RAINSCREEN IS USED NO MORTAR OR OTHER DEBRIS CAN ENTER THE CAVITY ASSURING PROPER DRAINAGE AND VENTILATION.

- A. Drainage Mat: Randomly oriented geometric patterned drainage and ventilation mat designed to eliminate moisture and moisture vapor in wall applications.

**** NOTE TO SPECIFIER **** PRODUCT SELECTION:

- FOR MANUFACTURED STONE USE DRIWALL RAINSCREEN 020-1
- FOR THIN SET NATURAL STONE USE DRIWALL RAINSCREEN 020-1
- FOR STUCCO USE DRIWALL RAINSCREEN 020-1
- FOR SIDING USE DRIWALL RAINSCREEN 020-1
- FOR NATURAL STONE USE ANY DRIWALL RAINSCREEN PRODUCT
- FOR BRICK USE ANY DRIWALL RAINSCREEN PRODUCT

- B. Product: Driwall Rainscreen 020-1 as manufactured by Keene Building Products.

1. Physical Characteristics: Three-dimensional mat heat laminated to a non-woven lightweight, vapor permeable fabric. The monofilament mat is heat welded at the junctions to form a resilient structure that isolates veneer from the back-up.
 - a. 0.25 inches (6 mm) thick.
 - b. 12.7 oz/sq. yd. (431 g/sq m) total weight.
 - c. 48 inches (122 cm) wide.
 - d. 65 feet (19.8 m) roll length.
2. Performance:
 - a. Drainage of moisture and ventilation between veneer and back-up support.
3. Material: UV stabilized polypropylene.
 - a. Class A flame spread per ASTM E84.
 - b. ASTM ASTM E 2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.
 - c. Hydrophobic compound.
 - d. Resistant to chemicals.
 - e. Does not support mold growth.

**** NOTE TO SPECIFIER **** DELETE APPLICATIONS NOT REQUIRED FOR PROJECT.

- C. Application:
 1. Provide at manufactured stone veneer and as indicated or required.
 2. Provide at thin set natural stone veneer and as indicated or required.

3. Provide at stucco veneer and as indicated or required.
4. Provide at natural stone veneer as indicated or required.
5. Provide at brick veneer and as indicated or required.
6. Provide at siding and as indicated or required.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 DRAINAGE MAT INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Inspection of Wall Conditions and Weather Barrier/Building Wrap: Ensure that the wall is free from structural defects, that any membranes or flashing are properly installed and that the final system will have a path for moisture to escape from the wall.

** NOTE TO SPECIFIER ** DELETE APPLICATIONS NOT REQUIRED FOR PROJECT.

- C. Installation for Manufactured Stone and Thin Set Natural Stone:
 1. Install building paper or house wrap and flashing to manufactures' recommendations.
 2. Place drainage mat horizontally against exterior wall fabric side out, entangled core to the building interior. Starting at the bottom of the wall, position the first piece of drainage mat where the bottom edge of the stone will meet the ledger board.
 3. Mechanically fasten with a staple hammer, large head nail or washer and screw one fastener for each square foot (0.1 sq. m). When installing over concrete or block back-up walls that do not accept mechanical fasteners hold in place with small dabs of glue every 2.0 feet (0.61 m). Do not fasten through flashing.
 4. Seam adjacent piece with the selvage edge overlapping the top of the lower drainage mat piece.
 5. Install expanded metal lathe over the drainage mat according to the stone manufacturer's recommendations.
 6. Apply scratch coat according to stone manufacturer's recommendations.
 7. Install manufactured stone according to guidelines. Provide a weep method for ventilation and drainage mat.
 8. Trim drainage mat around all penetrations, windows and doors so that the material is flush to the flashing.
- D. Installation for Stucco:
 1. Install building paper or house wrap and flashing to manufactures' recommendations.
 2. Place drainage mat horizontally against exterior wall fabric side out, entangled core to the building interior. Starting at the bottom of the wall, position the first piece of drainage mat where the bottom edge of the stone will meet the ledger board.
 3. Mechanically fasten with a staple hammer, large head nail or washer and screw one fastener for each square foot (0.1 sq. m). When installing over concrete or block back-up walls that do not accept mechanical fasteners hold in place with small dabs of glue every 2.0 feet (0.61 m). Do not fasten through flashing.

4. Seam adjacent piece with the selvage edge overlapping the top of the lower drainage mat piece.
5. Install expanded metal lathe over the drainage mat according to the manufacturer's recommendations.
6. Apply stucco according to manufacturer's recommendations. Provide a weep method for ventilation and drainage.
7. Trim drainage mat around all penetrations, windows and doors so that the material is flush to the flashing.

E. Installation for Natural Stone:

1. Install building paper or house wrap and flashing to manufactures' recommendations.
2. Install only as much drainage mat as will be covered by the stone each day. Wall ties can be installed through the drainage mat material.
3. Place drainage mat horizontally against exterior wall fabric side out, entangled core to the building interior. Starting at the bottom of the wall, position the first piece of drainage mat where the bottom edge of the stone will meet the ledger board.
4. Mechanically fasten with a staple hammer, large head nail or washer and screw one fastener for each square foot (0.1 sq. m). When installing over concrete or block back-up walls that do not accept mechanical fasteners hold in place with small dabs of glue every 2.0 feet (0.61 m). Do not fasten through flashing.
5. Seam adjacent piece with the selvage edge overlapping the top of the lower drainage mat piece.
6. Cut additional 2 inches (51 mm) wide by 12 inches length (305 mm) pieces of drainage mat and place strips every 2.0 feet (0.61 m) on center at the base of the wall extending a outside of the wall as a weep vent. Place the strips fabric side UP.
7. Install stone.
8. When wall is complete, cut vent strips back flush with wall.

F. Installation for Brick:

1. Install building paper or house wrap and flashing to manufactures' recommendations.
2. Install only as much drainage mat as will be covered by the brick each day. Wall ties can be installed through the drainage mat material.
3. Place drainage mat horizontally against exterior wall fabric side out, entangled core to the building interior. Starting at the bottom of the wall, position the first piece of drainage mat where the bottom edge of the brick will meet the ledger board.
4. Mechanically fasten with a staple hammer, large head nail or washer and screw one fastener for each square foot (0.1 sq. m). When installing over concrete or block back-up walls that do not accept mechanical fasteners hold in place with small dabs of glue every 2.0 feet (0.61 m). Do not fasten through flashing.
5. Seam adjacent piece with the selvage edge overlapping the top of the lower drainage mat piece.
6. Install brick according to Brick Institute of America or manufacturer recommendation leaving an open head joint every 2.0 feet (0.61 m).
7. Provide vents to provide open head joints during construction.

G. Installation for Siding:

1. Install building paper or house wrap and flashing to manufacturers' recommendations.
2. Place drainage mat horizontally against exterior wall, fabric side out, entangled core to the building interior. Start at the bottom of the wall and work up.
3. Mechanically fasten with a staple hammer, large head nail or washer and screw one fastener for each square foot (0.1 sq. m). When installing over concrete or block back-up walls that do not accept mechanical fasteners hold in place with small dabs of glue every 2.0 feet (0.61 m). Do not fasten through flashing.
4. Seam adjacent piece with the selvage edge overlapping the top of the lower drainage mat piece. Shingle so that selvage edge is installed toward the bottom of the wall.
5. Install siding, shingle or fiber-cement siding according to manufacturers' recommendations. When choosing a fastener, allow for thickness of drainage mat. Pneumatic nail guns can be used if nails meet manufacturers' recommendations and air pressure and depth gauge is set to fasten nail snug with surface.

END OF SECTION