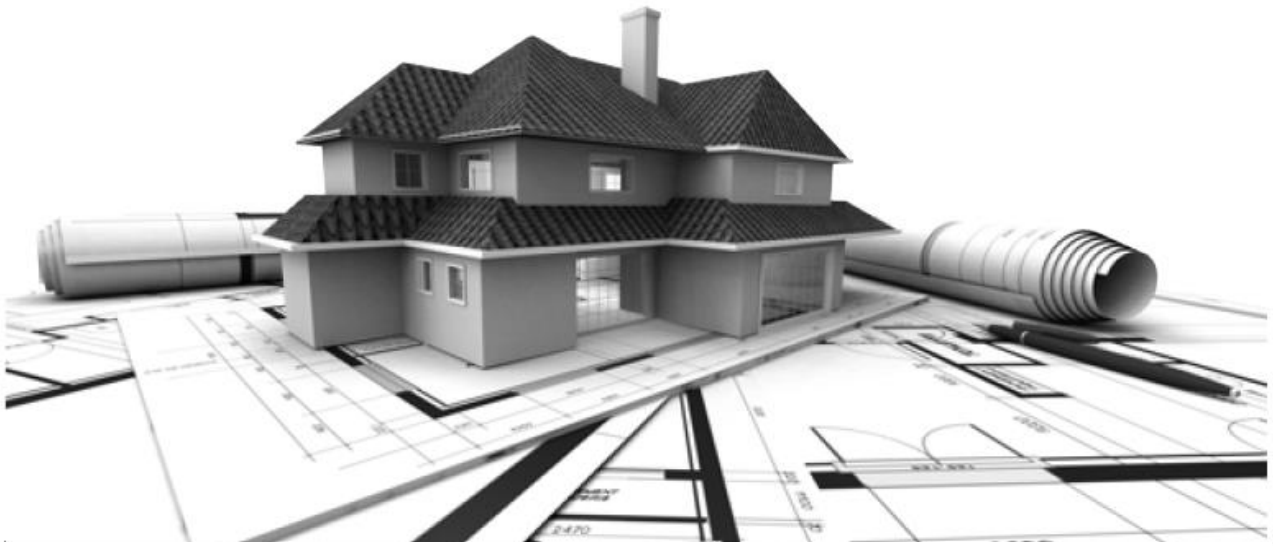


AttainSilence



AttainSilence **2.0.2, 2.0.5, 2.5.2, 2.5.5**

Technical Manual

Installation • Maintenance • Warranty

Distributed in the U.S.A. by:

ecore

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2mm and 5mm Sound Underlayment Adhesive Coverage Rate Calculator				
Sound Mat	Trowel Size		Coverage Rate Over Standard Substrates	Coverage Rate Over Sound Mats
2mm Sound Mat	 1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm)	Use to secure 2mm rubber sound mat to substrate and LVT/LVP to 2mm rubber sound mat	150 to 200 sq. ft./gal	150 sq. ft./gal
5mm Sound Mat	 1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm)	Use to secure 5mm rubber sound mat to substrate and LVT/LVP to 5mm rubber sound mat	100 to 125 sq. ft./gal	100 sq. ft./gal
Coverage rates shown here are for estimating purposes only. Actual jobsite coverage may vary according by application method, substrate, substrate conditions, trowel angle, and actual thickness applied.				

SUBSTRATE PREPARATION

IMPORTANT: Areas to receive flooring must be weather tight and maintained at a minimum uniform temperature of 65° F (18° C) for 48 hours prior to, during, and after installation. Failure to comply could result in flooring failure.

Step 1: Concrete substrate shall be prepared according to ASTM F710 standards. This standard calls for complete removal of all extraneous materials that may affect the adhesive bond. These materials include, but are not limited to, dust, paint, wax, solvents, adhesive residue, curing & hardening compounds, and sealers. If any of these are present, they must be removed prior to installation of flooring materials. Keep in mind that they should be removed mechanically without the use of chemicals, which could also act as a bond breaker for the adhesive.

The concrete should be given a sufficient amount of time to dry, naturally, before the application of adhesives. The moisture content should always be tested using the ASTM F-2170 testing for relative humidity. Relative humidity should result in a level of 80% or lower with diminishing results. If levels exceed these parameters, then the installation should not proceed until the situation has been corrected.

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.

NOTE: When using approved Mapei patching materials, Mapei's Primer T must be used over the surface of the patch before applying adhesive in Step 2 below. Failure to use primer may result in cohesive failure of the patching materials. Primer dilution shall be 2 parts water: 1 part primer.

Step 1: Gypsum substrates shall be prepared according to the ASTM F 2419 standards. This standard covers the practice of installation and preparation of the thick poured gypsum concrete underlayments over wood structural panel subfloors in commercial structures, or over concrete floors in commercial structures and preparation of the surface prior to the installation of resilient flooring.

NOTE: Per the ASTM C472 standard, the gypsum substrate shall have a compressive strength of 3000 psi or greater, and a density of 105 pcf.

Before installation of resilient flooring, gypsum must be primed with Mapei's Primer T at a dilution rate of 2 parts water: 1 part primer.

One of the first things to remember is that gypsum and concrete are not compatible chemically. If concrete makes contact with a gypsum-based product, the resulting chemical reaction is known as "ettringite," which destroys the integrity of the bond between the two surfaces. MAPEI's solution is to require a layer of primer between these surfaces to prevent them from coming into contact. It is crucial that a monolithic layer of primer is allowed to penetrate deep into the pores of the gypsum. It may be necessary to apply multiple coats.

INSTALLATION

Drying time of gypsum shall be determined using the ASTM F2419 standards, which reference the ASTM C472 and ASTM D4263 standards for moisture content.

It is important for the gypsum substrate to be free of imperfections and that it be level to the equivalent of 3/16" in 10'. If substrate is damaged, it must be flash patched before installation of the resilient floor covering.

Flash patching can be completed using one of Mapei's approved patches or self leveling materials. Please contact Mapei Technical Support for current offerings and installation recommendations of approved products: 1-800-992-6273.

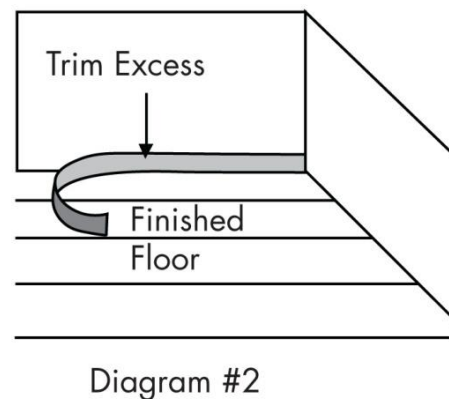
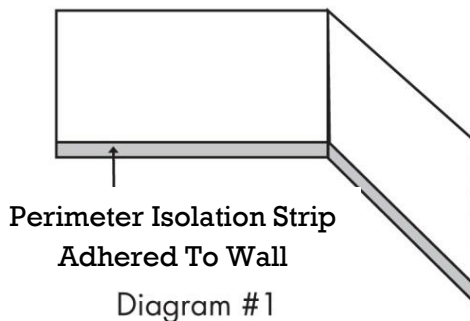
Step 1: Wood subfloors should be double construction, rigid, and free from movement.

Wood subfloors (when installed with grouted floor coverings like tile) must be prepared according to ANSI L/360 standards, as required by the floor covering manufacturer.

NOTE: Particleboard, often called "chipboard," masonite, and luan are not suitable underlayments.

Step 2: Day 1: It is essential to install the Perimeter Isolation Strip before placing and trimming ECOSilence impact sound insulation material!

Attach the Perimeter Isolation Strip to the perimeter wall of the entire subfloor, as well as around the perimeter of any protrusions, in order to isolate or break the vibration transmission path between the floor and the wall (see diagram #1).



Temporarily fasten the Perimeter Isolation Strip in place with masking tape, spray adhesive or spot gluing. The Perimeter Isolation Strip will later be trimmed flush with the new top layer of flooring above ECOSilence layer. (Diagram #2)

Assume the walls you are butting up against are not square. Using a chalk line, create a starting point for an edge of the material to follow.

INSTALLATION

Place the ECOsilence material so that it is perpendicular to the subsequent installation direction of the topping material (see diagram #3).

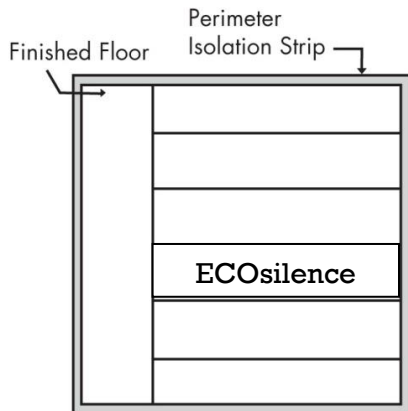


Diagram #3

ECOsilence shall be adhered to the substrate using the approved trowel.

2MM sound mat - 1/32" x 1/16" x 1/32" trowel using the required EGRIP Evolve.

5MM sound mat – 1/16" square notch trowel using the required EGRIP Evolve.

After laying sound mat into adhesive bed, it shall be rolled with a three section flooring roller. For **2MM** ECOsilence use a 35 lb. roller. For **5mm** ECOsilence use a 75-100 lb. roller. Allow adhesive to cure for 24 hours before proceeding with **Step 3**.

Step 3: Day 2: Apply Attain LVT/LVP over ECOsilence using approved trowel size listed below.

- **2MM ECOsilence - 1/32" x 1/16" x 1/32" trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/32" trowel to be approximately 150 sq. ft./gal.
- **5MM ECOsilence – 1/16" square notch trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/16" trowel to be approximately 100 sq. ft./gal.

Very Important to follow adhesive application instructions to ensure a successful installation. Ecore cannot be held liable for improper installation techniques.

Areas to receive flooring must be weather tight and maintained at a minimum uniform temperature of 65° F (18° C) for 48 hours prior to, during, and after installation. Failure to comply could result in flooring failure

The only approved adhesive for installation is: E-Grip Evolve by Ecore

INSTALLATION

(Step 3: Day 2 Continued – Application of adhesive and Installing Attain Tile and Plank)

NOTE: Adhesive coverage's listed above are for estimating purposes only. Actual jobsite coverage may vary depending on application method, substrate conditions, trowel angle, and actual thickness applied.

1. Apply adhesive to surface of ECOsilence using appropriate trowel listed below. Trowel size will vary dependent upon the thickness of the sound mat.
 - **2MM ECOsilence** – Apply LVT/LVP using a **1/32" x 1/16" x 1/32" trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/32" trowel to be approximately 150 sq ft/gal.
 - **5MM ECOsilence** – Apply LVT/LVP using a **1/16" square notch trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/16" trowel to be approximately 100 sq ft/gal.
2. Work only in small sections, where it's possible to install Luxury Vinyl tile and planks into adhesive bed within the specified ***working time**.
3. Allow adhesive to ****flash** until adhesive valley is clear and adhesive ridge is gummy to the touch, approximately 30-45 minutes over 2mm ECOsilence, and approximately 90-120 minutes over 5mm ECOsilence. (See page 7)
4. Carefully lay tiles and planks into the adhesive bed. Work off of the planks if possible, to eliminate excess movement before adhesive cures.
5. After completing each section, roll the tiles and planks with the specified 100 lb. three section flooring roller.
6. Prohibit foot traffic for a minimum of 48 hours after installation and light rolling loads for a minimum of 72 hours.
7. The recommended wait time is a minimum of 72 hours before returning furniture to the surface.
8. **IMPORTANT** – Chair mats are required under caster wheels/rolling chairs. This system is not intended for use under constant heavy rolling loads. Ecore cannot be held liable for failure to protect flooring surface.

***Working Time** – The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.

ADHESIVE INSTALLATION OVER ECOSILENCE

E-Grip Evolve

Premium High Performance Adhesive for ECOsilence and Attain Luxury Vinyl Tiles and Planks

DESCRIPTION

E-Grip Evolve is a high performance, wet-set adhesive designed for use with Ecore's ECOsilence, and Attain LVT/LVP. With its strong, durable, moisture-resistant and alkali-resistant bond, it is ideal for commercial applications. E-Grip Evolve has an excellent open time, develops strength quickly, and resists indentation. Its low volatile organic content makes it ideal for use in occupied buildings.

Application Characteristics over Porous Substrates

	Flash Time	Working Time
Permanent bonding (Rubber)	0 minutes	Approximately 30 minutes

Application Characteristics over Nonporous Substrates

	Flash Time *	Working Time **
Permanent bonding (Rubber)	0 minutes	Approximately 30-45 minutes

Application Characteristics over ECOsilence Sound Mat

	Flash Time *	Working Time **
Permanent bonding (LVT/LVP) over 5mm sound mat using a 1/16" square notch trowel	90-120 minutes or until adhesive valley is clear and adhesive ridges are gummy to the touch	Approximately 30-45 minutes over QT sound mat
Permanent bonding (LVT/LVP) over 2mm sound mat using a 1/32"x1/16"x1/32" trowel	30-45 minutes or until adhesive valley is clear and adhesive ridges are gummy to the touch	Approximately 15-30 minutes over QT sound mat

*** Flash Time:** The amount of time recommended for the adhesive to remain exposed to the air following application and before installation of the floor covering.

****Working Time:** The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.

Note: Flash and working times may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

ADHESIVE INSTALLATION OVER STANDARD SUBSTRATES

E-Grip Evolve

Premium High Performance Adhesive for ECOsilence and Attain Luxury Vinyl Tiles and Planks

DESCRIPTION

E-Grip Evolve is suitable for installation of Attain Luxury Vinyl Tiles and Planks over other approved substrates. **For installation involving ECOsilence under LVT/LVP, please refer to previous page instructions.** With its strong, durable, moisture-resistant and alkali-resistant bond, it is ideal for commercial applications. E-Grip Evolve has an excellent open time, develops strength quickly, and resists indentation. Its low volatile organic content makes it ideal for use in occupied buildings.

Application Characteristics over Porous Substrates

	Flash Time	Working Time
Permanent bonding (LVT/LVP)	15-30 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch	Approx 15-30 minutes

Application Characteristics over Nonporous Substrates

	Flash Time *	Working Time **
Permanent bonding (LVT/LVP)	30-45 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch	Approx 30-45 minutes



* **Flash Time:** The amount of time recommended for the adhesive to remain exposed to the air following application and before installation of the floor covering.

****Working Time:** The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.

Note: Flash and working times may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

ADHESIVE DATA

Limitations
Do not install over substrates containing asbestos
For interior installations only
Do not apply over existing adhesive residue
Use only when substrate temperature is between 65°F and 90°F (16°C and 32°C)
Follow flooring manufacturer's instructions for installation and substrate preparation

Sound Mat	Trowel Size	Coverage Rate Over Standard Substrates	Coverage Rate Over Sound Mats
2mm Sound Mat	 1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm)	Use to secure 2mm rubber sound mat to substrate and LVT/LVP to 2mm rubber sound mat	150 to 200 sq. ft./gal 150 sq.ft./gal
5mm Sound Mat	 1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm)	Use to secure 5mm rubber sound mat to substrate and LVT/LVP to 5mm rubber sound mat	100 to 125 sq. ft./gal 100 sq. ft./gal
Coverage rates shown here are for estimating purposes only. Actual jobsite coverage may vary according by application method, substrate, substrate conditions, trowel angle, and actual thickness applied			

PHYSICAL DATA	
Adhesive Type	Vinyl Acrylic Polymer
Antimicrobial	Yes
Color	Off-white
Consistency	Creamy
Density	8.3 lbs/gal (3.77 kg per 3.79 L)
VOC Content	.28 lbs/gal (34 g/l)
Shelf Life	2 years when stored at 73° F (23°C)
Flash point	>212°F (100°C)
pH	7 to 9
Maximum RH (ASTM F-2170)	80% RH diminishing
Freeze/Thaw	Protect from freezing Freeze/Thaw stable up to 5 cycles at 0°F (-18°C)

APPROVED MAINTENANCE PRODUCTS					
PRODUCT	Ecore Commercial Flooring 877-258-0843 Ecorecommercialflooring.com	Hilway Direct Tel: 1-877-356-6748 www.Hilway.com	PROCHEM Tel 800-241-8180 www.prochem.co.uk	ECOLAB Tel 800-352-5326 www.ecolab.com	Johnson DIVERSEY Tel 800-558-2332 option 5 www.johnsondiversey.com
NEUTRAL CLEANER	E-Cleaner	Neutral Cleaner	Neutra Clean	Oasis 100 or High Performance Neutral Floor Cleaner	Diversey Stride
ALKALINE CLEANER		Allsafe stripper		Maxx Dual Action	Diversey GP Forward
GERMICIDAL CLEANER		Disinfectant Cleaner	Power Pouch Disinfectant	Neutral Disinfectant Cleaner	Diversey J-512 (Food Areas) Diversey Virex II 256 (non-Food Areas)
MAINTAINER/WASH & WAX		Plus Cleaner/Maintainer		Easy Glow	Diversey Snapback Spray Buff
DRY BRIGHT EMULSION POLISH	E-Finish	High Gloss	Poly Finish	Monostar	Diversey Carefree
SEMI BUFFABLE EMULSION POLISH		Matte Satin High Gloss		Gemstar Laser	Carefree
FULLY BUFFABLE EMULSION POLISH		Matte Satin High Gloss		Gemstar Stratus	High Mileage UHS Floor Finish
POLISH STRIPPER	E-Strip	Allsafe Stripper	Pro Earth floor Strip	Maxx Floor Finish Remover	Diversey Pro Strip SC
POWER CLEANER (SPOT CLEANER)		Turbo Stripper		Maxx Dual Action	Diversey Spitfire

The data presented is correct at the time of printing. However, Ecore reserves the right to update this information as and when necessary. For the latest information, please check our web site at www.Ecoreintl.com. Providing this information does not imply any equivalence between each of the different manufacturers' products, or that other products would prove unsatisfactory.



MAINTENANCE

The following maintenance instructions are designed to minimize the cost factor, without compromising the long-term appearance of your floorcovering. Once the installation is complete, do not allow foot traffic for 24 hours until the adhesive has dried.

GENERAL

1. Remove all loose debris and ensure that all traces of dried adhesive are removed from the surface of the floorcovering.
2. Mop sweep or vacuum to remove dust and grit. Damp mop with a neutral detergent.

APPLICATION OF A FLOOR DRESSING TO PROVIDE ONGOING PROTECTION

1. The polyurethane surface treatment is designed to provide the initial protection for the floorcovering.
2. An application of a metalized polish will be required eventually to provide ongoing protection. The level and intensity of traffic will determine how soon the polish will have to be applied.
3. Using a suitable applicator the first coat should be applied thinly and evenly across the floor and to within 200mm of the skirting. It should then be left to dry. This normally takes approximately thirty minutes, depending on the ambient conditions and the thickness of the coating.
4. When the first coat is dry, a second coat should be applied at right angles to the direction of the first. Any subsequent coats should be applied at right angles, and the final coat should be applied right up to the skirting.
5. Two to three thin coats are normally sufficient to provide excellent ongoing resistance to abrasion, scuffing and removal of black heel marking. However, be guided by your own periodic assessments of the floor.
6. In order to minimize costs, subsequent polish applications may be applied only to traffic paths.

NOTE: Periodically – generally every six months – assess the appearance of the floor. If there is an unacceptable build-up of polish, especially at the edges of the room, this should be stripped and reapplied, as per the instructions above.

ROUTINE MAINTENANCE

The following recommendations are provided as a guideline, and the frequencies can be changed to optimize the appearance.

DAILY

1. Mop sweep or vacuum to remove dust and loose dirt.
2. As required, spot clean to remove stubborn marks with a neutral cleanser.

MAINTENANCE

WEEKLY/MONTHLY

1. Assess the appearance of the floor. As required, scrub with neutral cleanser diluted as per the manufacturers recommendations; a 3M® doodlebug or deck scrubber can be used.
2. If a luster is required then the floor should be damp mopped with a dilution of maintainer, which should then be left to dry before being trafficked.
3. To minimize any surface scratching, external doorways should have a mat placed inside to take off any water or dirt/dust and a scraper mat outside to remove large grit and small stones. These should be cleaned regularly to remain effective.
4. Cleaners and detergents should be diluted as per the manufacturers' instructions. Always follow the Health and Safety guidance provided.

MAINTENANCE PRODUCTS

To achieve the best results for your floor, and a long lasting beautiful floor, simply follow the easy steps laid out.

Polish - Provides a hard wearing surface to aid routine cleaning.

- Ensure the floor surface is clean and dry before applying Polish.
- Using a clean, lint free, flat mop, apply the undiluted polish evenly and thinly, in a uniform direction.
- Allow approximately 25 minutes to dry before applying a second coat at 90° to the first.
- It is advisable to leave the surface overnight before walking on it, to enable the polish to fully cure.
- Polish should be removed periodically (approx. every 6 months, dependent on traffic), by applying Stripper.

Maintainer - Regular routine cleaning of vinyl floor tiles.

- Before applying the Maintainer, ensure the floor is free from dust and grit by gently sweeping or vacuuming.
- Dilute 100ml (approximately half a cupful) of Maintainer with approximately 5 liters of cold water (Ratio 1:50).
- Damp mop the floor with the diluted solution and allow to dry thoroughly.

Stripper - Easy removal of Polish.

- To remove the buildup of Polish, dilute 500ml (approximately 2 and a half cupful's) of Stripper with 5 liters of clean water (Ratio 1:10).
- Apply this solution to the floor and leave for 10 minutes.
- Scrub the floor thoroughly with a deck scrubber or 3M® doodlebug .
- When the polish has been fully removed, pick up the slurry with a clean mop and rinse with clean water.
- Repeat until all residues have been removed.
- Allow the floor to dry.
- To remove excess adhesive after the initial installation of the floor, apply undiluted Stripper and rinse afterwards with clean water.

WARRANTY

Limited Lifetime Warranty

The ECOsilence is engineered to provide better performance than any other sound control product available, and has been rigorously tested to achieve proven results. Made from 92% resilient recycled rubber and backed by over 400 independent laboratory and field tests, ECOsilence has been selected and used in some of the best hotels and condominiums in the world.

Ecore offers a limited lifetime warranty on the ECOsilence brand of Impact Sound Insulation products against defects in material and workmanship and it shall meet all published specifications and perform effectively. Ecore warrants that during the warranty period ECOsilence shall not harden, become brittle, chip, crack, tear, or exhibit any signs of excessive deterioration except for normal wear and tear. For means of identification, Lifetime means for so long as the job installation remains unchanged by the original owner.

The recommendations for applications and installation are based on our extensive experience and on current technological practice. Our liability and responsibility in the event of damages is limited to the extent defined in our General Terms and Conditions of Business and is not in any way increased by the above recommendations or by advice given by our sales representatives or applications engineering staff. Ecore is a corporation duly organized and validly existing under the laws of the Commonwealth of Pennsylvania.

Limited System Warranty

Ecore, subject to the terms and conditions set forth below, warrants that its products or system will be free from manufacturing defects and will not fail under normal usage for a period of 5 years when used with our recommended system adhesive and used within its shelf life in accordance with our published technical data sheets and other written instructions. All applicable building codes, regulations and industry standards must be strictly followed. For purposes of this limited warranty, a system is defined as a group of three or more Ecore products, or Ecore product recommendations, used together in the same assembly and installed in accordance with our published installation instructions.

Attain LVT for use over select ECOsilence thicknesses is intended for Residential and Light Commercial use. For means of identification, Residential is defined as a single family detached dwelling and Light Commercial is defined as multi-family residential projects such as condominiums, apartments, timeshares, and other such dwellings that are not subjected to industrial traffic or heavy rolling loads. It is the sole responsibility of the installer, general contractor, architect or specifier, as a condition of warranty coverage, to first determine suitability and compatibility of our system for the end users intended use.

All other warranties, including implied warranties for a particular purpose, are expressly excluded. The sole remedy against the seller will be the replacement or repair of the defective goods, or at seller's option, credit may be issued not exceeding the selling price of the defective good.

WARRANTY

Exclusions from Warranty Coverage

The following are specifically excluded from coverage under this warranty:

1. Structural failure, inadequate subflooring or improper subfloor preparation.
2. Damages caused by Acts of God, including, but not limited to hurricane, flooding, earthquakes, or other types of natural disaster, or as a result of unforeseen circumstances.
3. Acts of negligence or product misuse and abuse.
4. Failure to comply with our technical data sheets and other written instructions, applicable building codes and regulations, and standard industry practices.
5. Normal wear and tear resulting from usage.
6. Cracking of substrate due to structural movement and or telegraphing of cracks or other imperfections to the top surface of the flooring materials.
7. Damage caused by excess deflection or other failure of the substrate.
8. 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 are required under chairs with casters/wheels.
9. Labor costs for installation of original or replacement material.
10. Problems caused by moisture, hydrostatic pressure, or alkali in the sub-floor.
11. Problems caused by uses, maintenance, and installation that are contrary to Ecore specifications, recommendations or instructions.
12. Installation of AttainSilence system with adhesives other than those recommended by Ecore, and contained in this manual.

These warranties are in lieu of any other warranty expressed or implied. Ecore shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. These warranties give you specific rights, and you may also have rights which may vary from state to state. To know what your legal rights are in your state, consult your local or state Consumer Affairs Office or your State Attorney General.

AttainSilence

877-258-0843 – www.ecorecommercialflooring.com

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