

## INSTALLATION REQUIREMENTS

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### 1. GENERAL INFORMATION

- 1.1 - **ENERGY 2.5** is a 100% solid vinyl floor covering, suitable for interior floor surfaces above, on, or below grade.
- 1.2 - **ENERGY 2.5** is FloorScore® Certified meeting all indoor air quality requirements, and manufactured in compliance with ASTM F1700 standards.
- 1.3 - **ENERGY 2.5** has a UV cured, ceramic bead reinforced wear layer and is suited for residential and medium commercial environments.
- 1.4 - **ENERGY 2.5** can be installed over hydronic in-floor heating systems. Maximum temperature must not exceed 28°C (82°F). In-floor heating must be covered with a minimum 25 mm (1") of concrete.
- 1.5 - Exposure to direct sunlight can cause damage to flooring and other interior finishes. During peak sunlight exposure, window coverings are required.

### 2. DELIVERY, STORAGE & ACCLIMATION

- 2.1 - Material shall not be delivered until the site is climate controlled and within required tolerances (listed below), unless an appropriate climate-controlled storage area is provided.
- 2.2 - All flooring and related materials shall be conditioned or acclimated within the area of installation and be adequately protected from soil, dust, moisture and other contaminants during this time. The conditioning shall be for 72 hours before installation or until the materials reach the required temperature of the installation area.
- 2.3 - The flooring should be acclimated to service conditions per NFCA guidelines. The ambient temperature should be maintained between 18 °C – 28 °C (65 °F – 82 °F) and subfloor temperature should be between 15 °C – 25 °C (60 °F – 77 °F). Relative Humidity shall be between 40% – 60%.
- 2.4 - Cartons should be stored on a smooth, flat, sturdy horizontal surface. Do not store cartons on end. It is recommended that cartons not be stacked more than 4 high during acclimation. Do not store cartons outside.

### 3. SITE CONDITIONS

- 3.1 - Concrete substrates must have an effective moisture barrier present under concrete.
- 3.2 - Substrate surfaces must be structurally sound, clean, dry, and smooth. The substrate temperature shall not be less than 15 °C (60 °F) or more than 25 °C (77 °F).
- 3.3 - Substrates must be free of excessive moisture, dust, existing adhesive, paint, varnish, oil, waxes, sealers, curing compounds, fillers and adhesives that may cause bond failure.
- 3.4 - All surfaces shall be vacuumed prior to installation.
- 3.5 - The General Contractor / Construction Manager / Installer must provide a finished concrete substrate in accordance with ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- 3.6 - Substrates must be smooth and flat within a tolerance of 1/8" (3 mm) in a 10' (3.05 m) radius.
- 3.7 - All substrate defects likely to impair finished work shall be reported to the General Contractor / Consultant / Owner in writing. The installation shall not proceed until all deficiencies and unsatisfactory site conditions have been corrected.
- 3.8 - All concrete and wood substrates must be tested and documented for moisture content and temperature before the installation of **ENERGY 2.5**.
- 3.9 - Flooring installation shall not commence until the building is enclosed.
- 3.10 - The HVAC must be operational to ensure stable conditions before, during, and after installation.

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### 4. SUBFLOOR PREPARATION

#### » EXISTING SUBFLOOR

- 4.1 - Existing cement, terrazzo, ceramic tile should be free of dust, wax, grease, detergent residue or any deleterious substance that may reduce or prevent adhesion. All grout lines should be filled and levelled.
- 4.2 - **ENERGY 2.5** can be installed over a single layer of non-cushioned resilient flooring, provided the existing flooring is fully-adhered and securely bonded to an approved substrate as outlined above.
- 4.3 - Any cuts, gouges, dents, grout joints, textured embossing or other irregularities in the existing floor must be prepared with a cementitious embossing leveler.
- 4.4 - Subfloors must be thoroughly vacuumed before installation.

#### » CONCRETE SUBFLOOR

- 4.5 - All defects likely to impair finished work shall be reported to the General Contractor / Owner in writing. The installation shall not proceed until all deficiencies and unsatisfactory site and environmental conditions have been corrected.

- 4.6 - Moisture and Alkalinity testing must be taken and recorded prior to installation.

Testing should comply with the following standards:

- A - **ASTM F2170:** "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes". Allowable moisture readings shall be in accordance with the recommended adhesive. Follow adhesive manufacturers requirements for RH tolerances.
  - B - **ASTM F1869:** "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride". Allowable moisture readings shall be in accordance with the recommended adhesive. Follow adhesive manufacturers requirements for moisture tolerances.
  - C - **ALKALINITY TEST:** A pH range between 7 - 9 is considered acceptable, unless stated otherwise by adhesive manufacturer. pH readings outside of the acceptable range will require corrective measures before beginning installation.
- 4.7 - Substrates must be free of excessive moisture, dust, existing adhesive, paint, varnish, oil, waxes, sealers, curing compounds and any other substances detrimental to fillers and adhesives that may cause bond failure.
  - 4.8 - Repair all cracks and surface imperfections with a cementitious patching compound. Follow patch manufacturers recommendations.
  - 4.9 - Substrate surface temperatures must be confirmed acceptable to Hydraulic Cement Underlayment, adhesives, and **ENERGY 2.5** requirements. Infrared laser thermometers are an acceptable method of testing surface temperatures.
  - 4.10 - Subfloors must be thoroughly vacuumed before installation.

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### **4. SUBFLOOR PREPARATION**

#### **» WOOD SUBFLOOR**

- 4.11 -** Plywood, hardwood, or other wooden subfloors must conform to and be installed in accordance with Building Code requirements regarding acceptable materials, thickness, support, span and fastening. All substrates must be structurally sound and free from movement.
- 4.12 -** Single layer floors and strip-wood floors must be covered with 1/4" or heavier underlayment to achieve a total subfloor thickness of 1". Underlayment panels must be a minimum 1/4" underlayment grade plywood panel, purpose-built for resilient flooring.
- 4.13 -** Particle board, strand board, lauan, mahogany and sheathing grade plywood are not recommended as underlayment for **ENERGY 2.5**.
- 4.14 -** Underlayment panels shall be free of internal voids, knot holes, splits or cracks and be complete with an upper surface that is sufficiently dense and smooth so that surface grain or texture will not be telegraphed to the surface of the finished flooring.
- 4.15 -** Underlayment panels shall be resistant to common static or dynamic loads.
- 4.16 -** Underlayment panels shall not contain materials that will cause staining of installed flooring.
- 4.17 -** New wood underlayment shall be acclimated to service conditions prior to installation.
- 4.18 -** Plywood underlayment panels shall be installed in accordance with panel manufacturers written requirements regarding type and spacing of fasteners.
- 4.19 -** The adjoining edges of underlayment panels shall be butted to a light contact, fastened, and free of vertical movement.
- 4.20 -** Minor imperfections shall be sanded smooth. If recommended by panel manufacturer, imperfections can be filled with a cementitious patching compound.
- 4.21 -** Subfloors must be thoroughly vacuumed before installation.

#### **» RADIANT HEAT**

- 4.22 -** **ENERGY 2.5** can be installed over approved radiant heat floor systems.
- 4.23 -** Ensure the flooring adhesive is recommended for installation over radiant heated floor systems before proceeding.
- 4.24 -** Concrete subfloors must be cured for a minimum of 90 days before beginning the installation.
- 4.25 -** In floor heating must be covered with a minimum of 1" of concrete.
- 4.26 -** Suitable for installations over approved hydronic heated floor systems, maximum ambient room temperature 28 °C (82 °F).
- 4.27 -** The heating system must be fully operational at normal temperature for a minimum of 21 days prior to the flooring installation.
- 4.28 -** The heating system must be turned off 24 hours prior to the flooring installation and must remain off for 12 hours after the flooring installation.
- 4.29 -** Starting 12 hours after the completion of the flooring installation, gradually increase the temperature over a 7-day period by 2° increments to the normal operating level.

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### 5. CONDITIONING

- 5.1 - All flooring, adhesive, and related materials shall be conditioned or acclimatized within the area of installation and be adequately protected from soil, dust, moisture, and other contaminants during this time. The conditioning period shall be for at least 72 hours before installation, or until the materials reach the service temperature and humidity levels of the installation area.
- 5.2 - It is the responsibility of the installer / owner to inspect all materials carefully before installation and to determine if the substrate and jobsite conditions are environmentally and structurally acceptable for floor installation. The manufacturer is not responsible for a floor failure resulting from any improper installation or substrate deficiencies, jobsite damage, or any visible defects after the flooring has been installed.
- 5.3 - **NOTE:** If the temperature and humidity levels are outside these parameters, the installation must not begin until the heating and ventilation system is operational. The temperature and humidity level must reach the minimum requirements and be maintained for a minimum of 72 hours before and maintained during and after the installation.

### 6. GLUE DOWN INSTALLATION

- 6.1 - Planks should be taken from several boxes to ensure a blend of color and design. Carefully check all planks for any defects. Ensure that you have the correct material and that all the cartons are from the same production lot. Do not install any planks from different production lots. No claims will be accepted for material that has been installed with visual defects.
- 6.2 - **PRIOR TO INSTALLATION:** Ensure all subfloor surfaces conform to requirements for flatness, temperature, moisture, and contaminant removal.
- 6.3 - Determine the direction that the flooring will run. Typically for rectangular plank products, the flooring runs the length of the room, however, personal preference may determine flooring direction.
- 6.4 - Use a full-spread, premium adhesive for the installation of vinyl planks. Use the notched trowel recommended by the adhesive manufacturer to achieve full transfer of the adhesive to the backing of the floor covering. Work in small enough area to ensure that the planks are laid into the adhesive according to the adhesive manufacturer installation methods.
- 6.5 - Position the plank in the adhesive without sliding and pressing firmly down, paying special attention to the edges and corners.
- 6.6 - Ensure that each plank fit "tightly" together, the planks should not be forced into place.
- 6.7 - Lay a complete row of planks and cut the last plank with the cut edge to fit against the opposite wall, the planks should not be forced into place.
- 6.8 - For the best visual effect, always stagger the planks from row to row with a minimum 20 cm (8") offset, installing the planks in a random pattern.
- 6.9 - Periodically check by lifting a plank to ensure full transfer of the adhesive to the backing of the floor covering.
- 6.10 - Immediately after installing the flooring, roll each section in both directions with a minimum 100-pound roller, following the adhesive manufacturer installation recommendations; re-roll the entire area after one hour. Promptly remove adhesive smudges with a clean cloth dampened with water while adhesive is still fresh and mineral spirits when dried.
- 6.11 - Ensure that the flooring is free from general traffic for 24 hours after installation.

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### 7. CARE & MAINTENANCE

- 7.1 - ENERGY 2.5 has a UV-cured ceramic bead polyurethane finish and does not require additional coatings or waxes.
- 7.2 - Exposure to direct sunlight can create excessive heat and can damage flooring and other interior finishes. During peak sunlight exposure, window coverings are recommended.
- 7.3 - Support furniture with wide-bearing, non-staining floor protectors. Ideally, the protectors should be at least 25 mm (1") wide, made of non-pigmented plastic or felt, and rest flat on the floor. Urethane or neoprene casters, felt pads, or floor protectors are recommended for all movable furniture. Use protection mats under chairs with casters.
- 7.4 - Use plywood or other protective material to cover flooring when moving heavy furniture or appliances into position.
- 7.5 - Use walk-off mats at all room entrances to prevent dirt, sand, grit and other damaging substances from being tracked onto the floor. Use non-staining mats. Do not use rubber or latex backed mats.
- 7.6 - For regular cleaning, sweep, or vacuum using a hardwood attachment. Do not use a vacuum with a beater bar. Damp mop floors using a PH neutral cleaning solution. Follow the manufacturers directions for using PH neutral cleaners.
- 7.7 - Wipe up spills quickly. Do not allow standing water to permeate through to the subfloor.
- 7.8 - For heavily soiled floors, use a neutral cleaner and scrub with a red pad or microfiber cloth. Rinse the pad / cloth frequently.
- 7.9 - For additional maintenance information, please contact your distributor.