

IMAGO FLOORS™

EXQUISITE ORNAMENTAL PARQUET

INSTALLATION GUIDE

1. Delivery and Storage

IMAGO Floors™ are very sensitive to ambient humidity conditions, since all wood flooring will expand and contract as relative humidity varies. In order to keep the flooring manufacturer's warranty valid after installation, the areas in which the wood floors are installed must be adequately ventilated with natural or mechanical air circulation at all times during the life of the flooring.

If prior experience at the site indicates that relative humidity during sustained heating periods will fall below 35%, the office in charge of building maintenance should provide equipment to introduce moisture into the floored area when required; conversely, if relative humidity increases to 50% or higher at any time, measures should be taken to dry the floored area, including turning on the heat.

At sites with humidity problems, the maintenance of the flooring may require:

- a.) The design of a localized HVAC system to also react to and automatically control ambient humidity conditions through the life of the flooring; and/or
- b.) Continuous monitoring of relative humidity with on the spot corrective measures, as needed, without altering the HVAC system.

Materials shall be delivered to the site in original unopened packages, bundles or containers with all the labels intact. Flooring shall be stored for at least 48 hrs at the jobsite in fully covered, well-ventilated areas and protected from extreme changes in temperature and humidity. Flooring shall maintain average moisture content of 6 to 9 percent. Temperature in the storage area shall closely approximate the temperature and humidity of the rooms in which the flooring is to be installed.

Flooring should not be delivered until the building has been closed in and cement work, plastering, painting, and other materials are completely dry. Concrete and plaster should be cured at least 60 to 90 days. Check basements and under floor crawlspaces to be sure that they are dry and well ventilated to avoid damage caused by moisture.

Prior to installation, place three (3) IMAGO Floors™ parquet tiles next to each other on a clean dry surface. Interlock the tongues and grooves into each other to make the tiles fit close together. Three 16" tiles will give a nominal width measurement of 48". A field measurement of 48 3/8" would show that the tiles have high moisture content.

2. Environmental Conditions.

Warehouse all IMAGO Floor products indoors, in a dry area out of direct sunlight, at temperatures between 30°F (-1°C) and 85°F (29°C). Protect all IMAGO Floor products from weather at all times, and be sure the area is dry and out of direct sunlight. Exposure to exhaust fumes from gas or oil combustion may cause yellowing. Allow all IMAGO Floor products to acclimate to the room temperature before starting the installation. Materials intended for installation must be stored indoors in a heated space protected from the weather and maintained at a minimum temperature of 65°F (18°C) and a maximum temperature of 100°F (38°C) for at least 72 hours before installation.

Rooms where wood flooring is to be installed shall have permanent heating and air conditioning installed and working or adequate arrangements for ventilation and temperature controls. The temperature shall be maintained at 14 to 27 degrees C [55 to 80 degrees F] and the humidity shall be maintained at 40% starting not less than three days prior to beginning of the installation of flooring and continuing throughout the remainder of the contract period.

The installer assumes all responsibility for final inspection of product quality. This inspection must be done prior to installation. If flooring is not acceptable, for whatever reason, contact DECORATIVE IMAGING, INC. immediately and do not install the floor. We strongly recommend racking your IMAGO Floor. Racking will give you a better idea of the overall layout, color and composition of the installation.

The installer is responsible for checking that the installation environment is acceptable.

DECORATIVE IMAGING, INC. does not warranty and is not responsible for floors that were installed in an environment that is not considered sound, according to the requirements laid out in these instructions. This includes problems arising from improper handling of IMAGO Floors™ or preparation of workspace, presence of excessive humidity/dryness/heat/cold, inadequate sub flooring or other deficiencies.

Note: The values stated in the guide specification for moisture content of the flooring and for the humidity and temperature of the space where the flooring will be installed are those that are generally suitable. When local experience has proven that values differing from those included in the guide specification are necessary because of geographical location or seasonal weather conditions, appropriate values will be substituted for the values stated in the guide specification.

3. Grade Requirements

IMAGO Floors™ must not be installed below grade. It is rated for on and above grade only. "Grade" refers to the outside soil line.

We do not recommend installing your IMAGO floor in full bathrooms that have a shower or bathtub.

4. Sub Floor Conditions

The sub floor must be of sound construction, and the surface flat and smooth. This is very important. Irregularities in the surface of the sub floor must be removed before installation. High spots may be sanded, low spots filled with appropriate filler. Final tolerances must be level within 1/8" in an 8' radius.

Use a moisture meter to check the sub floor moisture and a hygrometer to determine the relative humidity of the room, in order to prequalify the installation.

4a. Wood Sub Floors:

Wood subfloors must comply with these minimum requirements:

- Plywood:
Must be APA grade rated sheathing or CDX minimum.

- Oriented Strand Board (OSB):
Must be PS2 rated installed sealed side down.

- Particleboard:
Must be a minimum 40-LB density, stamped underlayment grade and 3/4" thick.

Check for and repair any irregularities, including sagging or loose sections of a wood sub floor. Make sure existing floor or subfloor is dry and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed. Squeaky or loose boards should be re-nailed. The wood subfloor must not exceed 12% moisture content. If there is moisture content exceeding 12%, the cause of the excess moisture must be determined and remedied prior to installation.

An uneven or cupped sub floor is an indication that excessive moisture is present.

Measure moisture content of both subfloor and wood flooring to determine proper moisture content with a reliable wood moisture meter.

The difference between the moisture content of the wood subfloor and the wood flooring must not exceed 4%.

All underlayment panels should be spaced 1/8" apart to insure adequate expansion space. Do not install over existing glue-down wood floors. Do not install over nailed floors that exceed 3-1/4" in width. Wide width floors must be overlaid with plywood. When installing over existing wood floors parallel with the flooring, it may be necessary to install an additional 1/4" layer of plywood to stabilize the flooring or install the wood floor at right angles.

For best results, install 1/4" plywood underlayment over existing subfloor. Install a vapor barrier (asphalt saturated paper) between subfloor and underlayment to help keep moisture away from your IMAGO Floor.

4b. Radiant Floor Heating:

IMAGO Floor products are recommended over Hydronic styles of radiant heat only. In a hydronic system, water is heated by a boiler or water heater and circulated through tubes buried in the floor. The floor will absorb this energy and give it off as radiant heat. The tubes must be encased in concrete or completely under a 3/4" plywood sub-floor.

Radiant heating systems where the tube is directly under the hardwood flooring boards, or systems where the tube is laid and separated with a plywood sleeper (with nothing on top of the tube) are not recommended with IMAGO Floor products. Radiant heated floors must be temperature controlled or engineered for the R-rating of the floor-covering product installed upon them. Before installation begins, determine whether the system is designed and controlled for wood flooring. Failure to do so may cause excessive heat damage and shrinkage. Install floor per the application instructions.

The radiant heat system should be run at two thirds of the of maximum output for a minimum of seven days to allow any remaining moisture to disperse.

Four days before flooring installation is to commence, the heating system should be turned off.

The floor is then installed using IMAGO Floors instructions. Moisture cured urethane glue must be used for glue down installations.

Approximately three days after installation is completed, and gradually over a period of a week, raise the temperature of the heating system to its desired operating level. It is advised to use this form of gradual increase in heat for the start of every heating season.

Surface temperature should never exceed 85°.

IMAGO Floor products are not recommend for use with any other style of radiant heat.

4c. Concrete Sub Floors:

Concrete sub floors must be tested in multiple areas for moisture. Acceptable tests for determining moisture content of concrete sub floors are:

- A 3% Phenolphthalein in Anhydrous alcohol solution. Chip the concrete at least 1/4" deep (do not apply directly to the concrete surface) and apply several drops of the solution to the chipped area. If any color change occurs, further testing is required.
- Calcium Chloride test. The maximum moisture transfer must not exceed 3 lbs./1000 square feet with this test.
- Tramex Concrete Moisture Encounter meter. Moisture readings should not exceed 4.5 on the upper scale.

Do not install on a concrete sub floor less than 60 days old. Fill low spots with a Portland cement-based leveling compound. Allow extra drying time for the leveling compound.

Concrete sub floors that test as dry may be wet at other times of the year, due to concrete's natural porosity. As such, all concrete sub floors should have a rated moisture barrier between the ground and the concrete.

5. Installation

Thoroughly clean the sub floor before installing.

Humidity is the single biggest cause of flooring expansion. Because the humidity of the room varies, the floor must be able to expand in ALL directions. The greater the surface area of flooring, the greater the room for expansion required.

Flooring shall be installed in accordance with the approved installation instructions of the manufacturer. Space for expansion shall be left along perimeter walls and around fixed projections through the floor surface. Unless otherwise shown by the approved installation instructions, expansion space shall be 5mm per meter [1/16" inch per foot] of distance between opposite walls, with one half of the space provided at each wall and a minimum space of 25mm [1"] at each wall.

IMAGO Floors™ must be glued down to a structurally sound base layer. The glue must be 100% polyurethane adhesive in order to provide a waterproof membrane that protects the laid flooring from absorbing moisture through the bottom and sides. The outer perimeter of IMAGO Floors™ after installation must be coated with a waterproof sealer in order to protect it from water damage to the sides.

6. Protection.

Protect flooring from damage from the time of installation until final acceptance.

Your newly installed IMAGO Floor should not be exposed to heavy load traffic for at least 72 hours after installation to allow setting and drying of adhesives. We recommend thoroughly cleaning your IMAGO Floor of dust, covering it with plastic followed by fitted sheets of hardboard, until all other construction is finished.

7. Gaps

Gaps are spaces that occur between boards or panels. The condition often becomes apparent during the first winter or heating season. Gaps are normal. They open and close seasonally. A normal gap can be any size so long as it closes seasonally. Permanent gaps are those that generally occur during the first year for a new construction or after an event such as a major remodel, a leak, or a flood. These are often related to structural acclimation and movement.

Wood shrinkage and system movement are the primary causes of gaps. Shrinkage of wood products occurs with any loss of moisture from about 28% moisture content (fiber saturation) to 0% moisture content (oven dry). In most areas of the US and Canada, interior seasonal environmental change results in a 3% or less overall moisture change. The associated normal gaps in IMAGO Floors™ are generally small – about 1/32" wide. In some areas with wide seasonal environmental changes, a significant heating season and humid summers with light air conditioning, such as New England or the Great Lakes region, the overall moisture change can be 5 or 6 percent. The associated normal gaps per tile can be 1/16" wide, +/-.

Flooring shipped to Colorado, Idaho, Arizona and similar arid areas will generally shrink due to the area environment. In these areas, extra time should be allowed for acclimation prior to installation. The three tile measurement in these areas will most likely be around 47 7/8" +/- [nominal length 48"], showing shrinkage before installation.

When installing all IMAGO Floor products, expansion spaces must be allowed around all walls and vertical objects. Wood constantly expands and contracts with changes in humidity and will buckle and/or cup if an adequate expansion

space is not provided during installation. Always allow for expansion when making end or side cuts around vertical objects. We recommend a minimum of 1/2" on all perimeters for our 3/4" and 3/8" floor products.

8. Configuration

IMAGO Floors™ standard size tile [16"] shall be within +/- .04" of stated size [Standard NOFMA tolerance for 2" strip flooring is +/- .005"]. Standards apply only at time of manufacture.

9. Grade

The grading standard establishes the look or appearance of the flooring. The overall manufacturing grade standard allows for the occasional mistake in grading by establishing a 5% allowance for off-grade material [1000 square feet minimum shipped]. In other words, in any given shipment, up to 5% of the footage may be off grade. However, most off-grade pieces can still be used when cut or placed in hidden areas such as closets.

10. Maintenance

Following a regular maintenance schedule, sweep or vacuum to remove dirt, grit, or dust that could scratch or be ground into the surface of the floor. Periodic damp mopping is also recommended.

Never wax an IMAGO Floor. Wax may inhibit the adhesion of future applications of protective coating materials, or make it slippery. Instead, clean your IMAGO Floor periodically with a professional or urethane wood floor-cleaning product.

Do not use wax, polish, oil soap, abrasive cleaners, steel wool, scouring powder, or ANY appreciable amount of water on your IMAGO Floor. Do not sand or strip your IMAGO Floor. Water and/or chemical cleaning agents (such as ammonia) can prematurely age your IMAGO floor and cause it to crack and split. Do not use cleaning products that are not specifically for pre-finished hardwood floors. Never use sheet vinyl or tile floor care products.

Wipe up food and other spills immediately with a dry or slightly damp towel.

When moving or rolling heavy pieces of furniture or appliances, always use protection, such as strips of 1/4" hardboard or Masonite under the wheels or legs.

Do not walk on your IMAGO Floor with sharp high-heels, tips or shoes in need of repair, as they can scratch or permanently dent your floors.

Area rugs should be used in all high traffic areas, and areas adjoining exterior doors. Make sure they stay dry and are cleaned underneath regularly.

They should be moved occasionally as they block natural light, which may give the appearance of discoloring under the rug. Over time this area will patina and match the rest of the flooring area. A breathable rug underlay should be used under all are rugs. Mesh or grid patterns are best. Do not use rubber, foam back, or plastic mats.

For wood flooring in the kitchen, place an area rug in front of the kitchen sink to catch water.

Maintain an ambient indoor humidity level of 35% to 60% throughout the year.

All Wood Floors Scratch and Dent. IMAGO Floors UV cured aluminum oxide finish provides superior wear resistance and exquisite beauty. Even so, all wood floors scratch and dent if abused.

Place felt protector pads on all the legs of the furniture to prevent damage to the floor. Do not use ball rollers.

Purchase touch-up pens to camouflage the appearance of scratches, or check with the commercial contractor who installed your flooring.

For minor scratches or dents the use of a touch up kit can repair damaged boards. If damage cannot be repaired using a touch-up kit, single tiles or boards may be replaced by a qualified installer.