

1 SUBFLOOR PREPARATION

DISCLAIMER: Refer to page [11](#) of this document.

The finished appearance of any resilient flooring installation will be determined in part by the subfloor over which it is installed. This is emphasized when the flooring products are directly glued to the subfloor. Rough, uneven subfloors, of substandard construction, with non-recommended materials, can reduce the life and impair the appearance of the floor covering. Therefore, proper construction and preparation utilizing recommended materials are important for a durable, good quality flooring installation.

1.1 BASIC GUIDELINES

Satisfactory results depend highly on proper subfloor preparation.

The following conditions must be met:

1. New concrete subfloors, on or below grade, must have a permanent effective vapor retarder, in accordance with ASTM E1745 and E1643. The vapor retarder must be placed directly underneath the concrete slab, above the granular fill, following manufacturer's instructions. A vapor retarder of 0.1 perms or less is recommended, and should be a minimum thickness of 10 mils. Renovation projects where it is uncertain whether such a vapor retarder was installed, or in circumstances where it cannot be determined if such a retarder was installed, it is recommended to apply a topical moisture control system to protect against potential moisture vapors and alkali migration that can lead to catastrophic failures.
2. Concrete substrates must be fully cured and free of any hydrostatic and/or moisture problems. **Moisture and alkalinity tests must be performed on all concrete substrates, under in-service conditions.** It is recommended to turn on the HVAC unit prior to performing moisture testing, in order to ensure stable testing conditions and accurate results. A functional HVAC system is also recommending during flooring installation. The pH level should be in the range of 7 to 10. Relative humidity of the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride). See [1.2.5 Moisture Vapor Emissions and Alkalis](#).
3. The subfloor surface must be free of any wax, oil, grease, sealer, curing compound, paint, varnish, old adhesive or any other contaminants that may inhibit bond strength. All contaminants must be removed from the subfloor via mechanical abatement. **Never use chemical abatement methods** as residual chemicals on or penetrating the surface of the slab can lead to failures.
4. Subfloors must be smooth and level within a tolerance of 1/8" (3 mm) in a 10' (3.05m) radius. Mondo does not recognize the "F" numbers: FF = floor flatness, FL = floor levelness. Minor surface cracks or grooves must be filled with a good quality Portland cement based patching or leveling compound such as Mapei or Ardex. High spots, bumps and peaks must be repaired prior to installation. Mondo recommends a magnesium trowel finish. **Please note that while a smooth surface is desired, a shiny, slick, non-porous or over-porous slab is not acceptable and will require additional preparation prior to installing Mondo flooring products. Once the subfloor preparation is complete, you should have a CSP (Concrete Surface Profile) of about 1.**

5. **All subfloors must be properly prepared to provide a satisfactory bonding surface for the adhesive being used to install the resilient flooring.**
6. Mondo flooring can be installed over surfaces that are firm, structurally sound, dry, clean, smooth and level; however, **we DO NOT recommended that Mondo flooring be installed over the following: VCT/VAT, LINOLEUM, STONE, POURED URETHANE OR EPOXY SURFACES.** When installing over ceramic or marble tiles, you must communicate with Mondo's [Technical Department](#) for proper instructions.

1.2 CONCRETE SUBFLOORS

NOTE: Regardless of the type of concrete used as a base for resilient flooring, the responsibility for subfloor warranties or performance guaranties rests with the concrete manufacturer and/or the general contractor. In the event of an underlayment/subfloor failure, Mondo will not be held liable. The engineer, architect or designated authority must be notified in writing by the flooring contractor of any underlayment/subfloor defects or installation conditions that could result in unsatisfactory performance. Product installation cannot begin until all necessary corrections have been made. Installation of Mondo flooring shall constitute acceptance of the installation conditions and product by the flooring contractor.

1.2.1 GENERAL

- 1.2.1.1 New concrete subfloors must be allowed to cure and dry before installing any Mondo flooring. Typical curing time for normal concrete is 28 days. However, drying time is typically 4 weeks for every 1" thickness of slab (i.e. a 6" slab will take approximately 24 weeks to adequately dry).
- 1.2.1.2 Concrete subfloors must be dry, sufficiently porous, clean and free of paint, wax, dust, oil, sealers, grease, curing agents, surface hardeners, solvents, asphalt, old adhesives and any other contaminants that could inhibit bond strength. Prior to beginning any installation of Mondo products it is recommended that the entire room be vacuumed thoroughly to remove dust, loose dirt and debris. **Do not use sweeping compounds.** If desired, use damp sawdust to help with sweeping.
- 1.2.1.3 If a curing agent or concrete sealer has been applied on the subfloor it must be removed by means of mechanical abatement. **Never use chemical abatement methods** as residual chemical on or penetrating the surface of the slab can lead to adhesion failures.
- 1.2.1.4 A problem with proper adhesion to old concrete subfloors usually arises from moisture, dusty, chalky or flaky concrete surfaces or from previous treatments with products containing oil, silicone or other bond reducers. Concrete subfloors that are loose, sandy and scaly or have a white powdery surface are not acceptable. These subfloors must be scarified or shot-blasted to remove affected material and patched and/or leveled to tolerance using a good quality Portland cement based patching or leveling compound such as Mapei or Ardex. **Gypsum based products are strictly prohibited.** All concrete surface problems should be inspected thoroughly, and any problems should be reported and repaired. Specialists from manufacturers such as Mapei or Ardex can aid in the resolution of concrete surface problems.

- 1.2.1.5 Mechanical abatement methods such as sanding (depending on the product), wet grinding, scarifying or shot-blasting, etc., can remove sealers, curing compounds, paint, varnish, releasing agents or wax. Mondo recommends a light to medium shot-blasting (ICRI CSP #3 to #5 profile). In cases where oil and/or grease have penetrated deeply into the concrete and cannot be removed by mechanical abatement, replacement of the soiled area must be carried out. A bond test should be made prior to any installation. Special attention should be paid to areas where paint, varnish, wax and other agents were removed.
- 1.2.1.6 Subfloors must be smooth and level within a tolerance of 1/8" (3 mm) in a 10' (3.05 m) radius. Mondo does not recognize the "F" numbers: FF = floor flatness, FL = floor levelness. Minor surface cracks or grooves must be filled with a good quality Portland cement based patching or leveling compound such as Mapei or Ardex. High spots, bumps and peaks must be repaired prior to installation. Mondo recommends a magnesium trowel finish. **Please note that while a smooth surface is desired a shiny, slick, non-porous or conversely an over-porous slab is not acceptable and will require additional preparation prior to installing Mondo flooring products. Once the subfloor preparation is completed you should have a CSP (Concrete Surface Profile) of about 1.**
- 1.2.1.7 Moisture and alkalinity tests must be performed on all concrete substrates, under in-service conditions. It is recommended to turn on the HVAC unit prior to performing moisture testing, in order to ensure stable testing conditions and accurate results. The pH level should be in the range of 7 to 10. Relative humidity of the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride). See [1.2.5 Moisture Vapor Emissions and Alkalis](#).

1.2.2 PERFORMING A BOND TEST

Bond tests are recommended to help installers assess adhesion strength in a given environment and to help determine the suitability of the subfloor before an installation begins. **Bond tests are meant to provide basic information and should not be considered as an equal representation of a full scale installation. Always consider that each specific area of the subfloor and the various installation methods and procedures carried out influence the outcome of any flooring installation.** This is why results can vary. It is recommended to always follow the subfloor preparation guidelines, and to avoid only relying solely on a bond test.

1. Once the subfloor preparation has been completed and is believed to be ready to receive the Mondo floor covering, select a small area (3' x 3') for your bond test.
2. Cut out 6 strips of material (about 2 inches wide by 1 foot long) from attic stock or sample material. Using the specified adhesive, glue down each strip (side by side) using the recommended notched trowel, leaving 4 to 6 inches of space between each strip. **Install strips of material following the same methods and procedures that are recommended for the installation of the specified product.**
3. After a period of a least 24 hours, attempt to remove the strips of flooring by pulling up one of the corners of the strip. If the bond is adequate, the material will most likely rip apart before it lets go of the substrate.

4. Determine if the bond is adequate. If it is, then proceed with the installation. If it is not, then make necessary corrections and/or contact Mondo's [Technical Department](#) for recommendations.

1.2.3 SURFACE PREPARATION

Mondo will not take any responsibility in regards to the strength, adhesion or general performance of underlayments/subfloors. Patching, leveling and other industry standard subfloor preparation measures are the responsibility of the flooring installer/contractor.

- 1.2.3.1 Cracks, saw-cut joints, expansion joints, holes/pitting, rough and uneven areas must be made smooth and level with a good quality **Portland** cement based leveling or patching compound, such as Ardex or Mapei. **Gypsum based patching and leveling compounds are strictly prohibited.** The following are notes on how to recognize and properly deal with various subfloor circumstances:

- a) **Shrinkage cracks** are generally flush with the slab surface but slightly split open. These can be patched using a good quality **Portland** cement based patching or leveling compound, such as Ardex or Mapei, or with Mondo PU 105 adhesive (when PU 105 is the specified adhesive for the installation).
- b) **Structural cracks** generally have a slight lip (are not flush) and will always telegraph (effects from movement can be observed through the floor covering) to the surface of the installed floor. Even if these can be temporarily repaired with a good quality **Portland** cement based patching or leveling compound, such as Ardex or Mapei, or with Mondo PU 105 adhesive (when PU 105 is the specified adhesive for the installation), it is essential to advise the Owner that telegraphing may reoccur at any point in time. Slab movement cannot be controlled.
- c) **Saw-cut joints** are flush and level with even width but sometimes varying depth. These must be cleaned (scraped and vacuumed) and then patched using a good quality **Portland** cement based patching or leveling compound, such as Ardex or Mapei, or with Mondo PU 105 adhesive (when PU 105 is the specified adhesive for the installation).

NOTE - Saw-cut and/or control joints are always moving and are by definition unstable. This means that, once the flooring is installed, they may telegraph through to the surface of the material. It is essential to advise the Owner that telegraphing may reoccur at any point in time and that slab movement cannot be controlled.

- d) **Expansion joints** can appear uneven since they are not cut and are of varying widths and depths. The best treatment for these joints is to cut the flooring on either side of the expansion joint and use a proper transition strip molding. However, they can also be stone ground (if necessary) to make them level and then patched using a good quality **Portland** cement based patching or leveling compound, such as Ardex or Mapei, or with Mondo PU 105 adhesive (when PU 105 is the specified adhesive for the installation). A mesh system may need to be adopted if these joints are very large. These are intended to accommodate movement, thus a flexible elastomer sealant should be used to keep foreign materials out of the joint.
- e) **Surface degradation** classifies holes, pitting, scaling, rough and uneven areas, etc. The surface has to be mechanically prepared to correct these issues and then patched using a good quality **Portland** cement based patching or leveling

compound, such as Ardex or Mapei, or with Mondo PU 105 adhesive (when PU 105 is the specified adhesive for the installation).

NOTE: The above notes describe the most common and simplest of scenarios for each. When more severe conditions exist, and/or there is uncertainty about what or how to properly prepare a structural underlayment, please contact Mondo's [Technical Department](#) for recommendations.

NOTE: When PU 105 is used to fill cracks/joints, it must be allowed to fully cure and then must be sanded prior to flooring installation. Otherwise, the dried adhesive will be much too smooth for a proper bond.

DISCLAIMER: Based on our years of experience, these suggestions have been known to accommodate the above-mentioned conditions. However, Mondo cannot predict or be held liable for any unexpected or extraordinary conditions. Therefore the user assumes all responsibility.

1.2.4 ON AND BELOW GRADE CONCRETE

NOTE: Mondo accepts no responsibility for failures associated with moisture and will be held harmless from any moisture problems when a membrane has not been installed or has been compromised.

1.2.4.1 A concrete slab on or below grade will continually absorb moisture from the earth in the absence of a moisture barrier membrane. If no moisture barrier membrane is installed then proper measures are to be taken in order to topically seal the slab and protect the flooring from excess moisture vapors and alkali migration.

1.2.4.2 The appearance of a concrete slab can be deceiving when there is question about its dryness. It is never safe to assume that a concrete floor that looks dry is sufficiently dry. Rapid evaporation at the surface will make it look dry but below the surface the concrete may hold considerable moisture that will contribute to high moisture vapor emissions. Relative humidity of the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride). See [1.2.5 Concrete Moisture Content and Alkalis](#).

1.2.5 CONCRETE MOISTURE CONTENT AND ALKALIS

NOTE: It is never safe to presume that a concrete floor that looks dry is sufficiently dry. **DO NOT install Mondo flooring on a concrete slab that has not been tested for moisture and that does not meet the requirements as set forth in this manual.** It is the responsibility of the general contractor to deliver a leveled and dry subfloor for the installation of the resilient flooring. Therefore, it is his responsibility to conduct moisture tests until the subfloor meets the necessary requirements. The results of these tests must be communicated to the flooring contractor. We suggest using third party professionals as much as possible and keeping a copy of the test results for a minimum three-year period or for the duration of the floor covering warranty.

NOTE: Moisture tests will help confirm whether the slab is dry enough to proceed with the installation. It does not mean the slab will always remain dry. **Never attempt a moisture test until the HVAC unit has been operational for at least 7 days and/or the site conditions**

(temperature and humidity) are constant in the building and reflective of in-service conditions.

MONDO WILL NOT GUARANTEE THE ADHESION OF A MONDO PRODUCT TO A SUBFLOOR WITH RELATIVE HUMIDITY OR MOISTURE VAPOR EMISSIONS RATES EXCEEDING THE TOLERANCE OF THE SPECIFIED ADHESIVE, WHEN TESTED IN ACCORDANCE TO ASTM F2170 AND F1869.

- 1.2.5.1 It is essential to dry the slab sufficiently in order to reduce moisture vapor emissions to an acceptable level that falls within the tolerance range of the specified adhesive. Relative humidity of the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride). See [1.2.7 Moisture Tests](#).

NOTE: A high rate of moisture vapor emissions will bring the alkaline salts within the concrete slab up to the surface. These alkalis will attack and eventually break the bond of the adhesive. The end result will be a failure of the flooring installation. The best way to deal with these alkalis would be to mechanically remove them (ex: shot-blast, etc.), after the moisture problem has been corrected. Mondo recommends a concrete pH range of 7 to 10.

NOTE: Drying of the slab in the first few weeks after pour should be slow. Fast drying will, in many cases, dry the slab on the surface while it remains wet at the bottom. This situation will make the slab curl at the edges and joints, and can also lead to surface cracking.

- 1.2.5.2 New concrete subfloors must be allowed to cure and dry before installing any Mondo flooring. Typical curing time for normal concrete is 28 days. However, drying time is typically 4 weeks for every 1" thickness of slab (i.e. a 6" slab will take approximately 24 weeks to adequately dry).

- 1.2.5.3 Many factors affect a slab's ability to dry. If moisture rates remain high, the following are factors to consider and suggestions on how to help the drying process:

- a) **Atmospheric and environmental conditions.** If the facility does not have an HVAC unit in operation, the slab is subject to changes in temperature and humidity as governed by outside conditions. This is an important factor that greatly affects the drying time of a slab. Moisture tests performed before an HVAC unit is operational and/or before ambient conditions are stable will indicate false results and therefore are a waste of time and money. **Ensure the HVAC has been running for at least 7 days so that the temperature and conditions are constant in the building, and most importantly that they are reflective of in-service conditions.** After the 28-day concrete curing period, you can use dehumidifiers to help speed along the process.
- b) **Curing compounds and sealers.** If curing compounds and/or sealers have been used to treat the slab, they will block a significant quantity of the slab's capillary pores thus reducing its ability to expel moisture vapor and adversely affect bond performance. These products **must be mechanically removed** (scarifying, shot-blasting, etc.) in order to allow the slab to dry much more effectively. **Allow for the slab to dry out for a period of 24 hours.** Do not use chemical abatement methods.

- c) **Surface contaminants.** Dirt, dust, debris and other surface contaminants common to construction sites also inhibit a slab's ability to expel moisture. Through regular sweeping, vacuuming and keeping a clean surface you will assist the slab in drying as efficiently as possible.

1.2.6 MOISTURE VAPOR EMISSION AND ALKALINITY CONTROL SYSTEMS

NOTE: Failure to adequately protect against high moisture vapor emissions or alkali migration will compromise the flooring system. Mondo accepts no responsibility for failures associated to moisture.

- 1.2.6.1 When moisture vapor emissions are above tolerance for the specified adhesive, a moisture vapor reduction barrier can be used on concrete subfloors, on or below grade. Properly installed, they will effectively reduce the moisture vapor emissions and alkali migration coming from the concrete slab.
- 1.2.6.2 It is the user's responsibility to communicate with the manufacturer of the moisture control system of choice, in order to receive appropriate subfloor preparation instructions, application instructions, post application instructions, warranties and all other related information, such as which Mondo adhesives are compatible with their respective products. Mondo will not be held liable for system compatibility, warranties and performance of selected products.

1.2.7 MOISTURE TESTS

NOTE: It is never safe to presume that a concrete floor that looks dry is sufficiently dry. DO NOT install Mondo flooring on a concrete slab that has not been tested for moisture or that does not meet the requirements as set forth in this manual. It is the responsibility of the general contractor to deliver a leveled and dry subfloor for the installation of the resilient flooring. Therefore, it is his responsibility to conduct moisture tests until the subfloor meets the necessary requirements. The results of these tests must be communicated to the flooring contractor. We suggest using third party professionals as much as possible and keeping a copy of the test results for a minimum three-year period or for the duration of the floor covering warranty.

- 1.2.7.1 Moisture vapor emissions must not exceed the maximum allowable tolerance of the specified adhesive, when tested in accordance with ASTM F1869 (anhydrous calcium chloride test). For accurate testing, the area of the slab must be clean, free of debris and adhesive residue. Shot blast surface or wire brush slab clean. Remove dust thoroughly. Do not use chemicals of any kind to clean the area. As per ASTM F1869, you must do three (3) tests for the first 1,000 ft² and one (1) test for every additional 1,000 ft² or fraction thereof. It is recommended to turn on the HVAC before testing to ensure accurate results. Avoid test locations near cracks or joints, or in direct sunlight.
- 1.2.7.2 Relative humidity in the concrete slab must not exceed the maximum allowable tolerance of the specified adhesive, when tested in accordance with ASTM F2170 (in-situ probes test). You must do three (3) tests for the first 1,000 ft² and one (1) test for every additional 1,000 ft² or fraction thereof. It is recommended to turn on the HVAC before testing to ensure accurate results. Avoid test locations near cracks or joints, or in direct sunlight.
- 1.2.7.3 The General Contractor must communicate the results of the moisture tests to the flooring contractor. We suggest keeping appropriate paperwork on the tests and their

respective results for a minimum three-year period or for the duration of the floor covering warranty.

1.2.8 SUSPENDED CONCRETE SLABS

- 1.2.8.1 While suspended concrete slabs are protected from direct hydrostatic moisture sources, the subfloor should be permitted to dry thoroughly with good ventilation.
- 1.2.8.2 When poured on steel pans, a longer drying time will be necessary prior to performing moisture tests.
- 1.2.8.3 Relative humidity of the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride). See [1.2.5 Concrete Moisture Content and Alkalis](#).

1.2.9 LIGHTWEIGHT, GYPSUM AND CELLULAR CONCRETES

The direct installation of any Mondo flooring over cellular or gypsum concrete is NOT acceptable. A second topping should be considered and must be validated by concrete experts such as Ardex, Mapei or other qualified concrete professional. If you have a gypsum based substrate, you must communicate with Mondo's Technical Department for recommendations.

- 1.2.9.1 Special attention should be paid to lightweight concrete subfloors to determine if they are suitable for the installation of Mondo products.
- 1.2.9.2 Some lightweight concretes have densities too low for installing resilient flooring. Refer to current version of ASTM F710. A minimum compressive strength of 3000psi after 28 days is required. If not, it should be topped with 2" (5 cm) of standard, normal density concrete ($\geq 140\text{lbs/ft}^3$). In all cases, such subfloors should not be subjected to heavy loads (static or dynamic) or subjected to repeated impacts.
- 1.2.9.3 Moisture vapor emissions must not exceed adhesive tolerance, when tested in accordance with ASTM F1869 and relative humidity must not exceed adhesive tolerance, when tested in accordance with ASTM F2170.

1.2.10 RADIANT HEATING SYSTEMS

Mondo products can be successfully installed over radiant heating, provided the conditions below are respected at all times:

- 1.2.10.1 Even in the presence of radiant heating, all substrates must be tested for moisture to ensure they do not surpass the specified adhesive's capacities. Moisture vapor emissions must not exceed adhesive tolerance, when tested in accordance with ASTM F1869, and relative humidity must not exceed adhesive tolerance, when tested in accordance with F2170.
- 1.2.10.2 The radiant heating system has to be turned off 48 hours before the installation, remain off during the installation and 48 hours after the installation.

- 1.2.10.3 **DO NOT** subject flooring to drastic temperature fluctuations. Adjust settings gradually, 5° per hour.
- 1.2.10.4 The radiant heating temperature **must not to exceed 86°F (30°C), at subfloor level. Proper thermostats must be installed to ensure the appropriate temperature is measured.**
- 1.2.10.5 Mondo sport flooring products will have insulation “R” values between 0.9 and 1.1 depending on the material thickness. Commercial products will have negligible insulation properties.

1.2.11 CURING & HARDENING COMPOUNDS (CONCRETE POROSITY)

- 1.2.11.1 Concrete subfloors that have been treated with curing compounds or hardening compounds will inhibit bond, and therefore are not suitable for covering with Mondo flooring under any circumstances, until removed.
- 1.2.11.2 These compounds must be mechanically removed (scarifying, shot-blasting, etc.). The method of removal selected must ensure the complete removal of the compound. The degree of abrasion required will vary with the type and depth of penetration of the compound on the surface.
- 1.2.11.3 Before starting an installation, you must perform bond tests in various areas of the installation to ensure proper adhesion (refer to [1.2.2 Performing a Bond Test](#)).
- 1.2.11.4 Concrete subfloors that are excessively porous and absorbent should be coated with a good quality **Portland** cement based patching or leveling compound, such as Ardex or Mapei. Always contact the manufacturer for proper application procedure.

NOTE: Regardless of the type of concrete used as a base for resilient flooring, the responsibility for substrate warranties or performance guaranties rests with the concrete manufacturer and/or the general contractor. In the event of an underlayment/subfloor failure, Mondo will not be held liable. The engineer, architect or designated authority must be notified in writing by the flooring contractor of any underlayment defects or installation conditions that could result in unsatisfactory performance. Product installation must not begin until all necessary corrections have been made. Installation of Mondo flooring shall constitute acceptance of the installation conditions and product by the flooring contractor.

1.3 WOOD SUBFLOORS

NOTE: Wood subfloors will experience movement over time due to expansion and contraction. Telegraphing of plywood seams must be expected at some point. The severity of the telegraphing will depend on the system’s stability and the amount of movement the subfloor experiences.

1.3.1 GENERAL

- 1.3.1.1 The underfloor construction must be solid and have a well ventilated air space below the wood subfloor to avoid deterioration from dry rot.
- 1.3.1.2 Do not install Mondo flooring on sleeper-constructed or other wood subfloors directly on or below grade. When there is not enough ventilation, moisture from the concrete will

build up and lead to possible installation failures, deterioration, warping and rotting of the wood subfloor.

- 1.3.1.3 Wood subfloors must be clean, dry, smooth and free of paint, varnish, oil, wax, grease and other foreign materials that could inhibit bond. Oil-treated plywood floors are not acceptable subfloors.
- 1.3.1.4 In any floor-covering installation, plywood should be dry with moisture content not lower than 6% or greater than 12%, when measured with a quality wood moisture meter (electronic hygrometer).
- 1.3.1.5 Plywood spacing should not exceed 1/16" anywhere to minimize telegraphing of these seams.

1.3.2 STRIPWOOD SUBFLOORS

- 1.3.2.1 Mondo does not recommend the installation of its products directly over stripwood subfloors.
- 1.3.2.2 If an installation on a stripwood subfloors must take place, then we recommend that the stripwood be covered with plywood 5/8" (1.59 cm) in thickness or heavier (refer to section 1.3.3 below).

1.3.3 UNDERLAYMENT

- 1.3.3.1 Underlayment is the most common type of wood subfloor in use today. Although many different products are being called floor underlayment, Mondo recommends exterior grade plywood with at least one good side, such as: APA (Engineered Wood Association) Exterior grade plywood (A-A Exterior, A-B Exterior or A-C Exterior) and CANPLY (Canadian Plywood Association) Exterior certified plywood (Canada: Grade G2S A-A or G1S A-C. USA: G2S A-A, A-B, B-B, or G1S A-C, B-C).
- 1.3.3.2 Products such as hardboard, particleboard, chipboard or flakeboard are not to be used.

DISCLAIMER

These instructions conform to commonly accepted installation techniques in use with Mondo floor coverings. However, Mondo will not accept any liability whatsoever for any incorrect implementation of these instructions nor for any failure of equipment, paint & primers, leveling compounds, adhesives or other products not manufactured by Mondo that may be referenced in these instructions nor for any adverse handling, climatic or environmental conditions that may affect such installation.

The above installation recommendations are provided for general guidance only. Mondo assumes no responsibility neither for actual work performed nor for loss or damage that may result from the use of this information due to variations of processing or working conditions outside our control. Users are advised to confirm suitability of products by their own tests.

Warranty only extends to quality and performance of rubber flooring.

WARNING: Should you have any concerns or be unsure about subfloor conditions or installation procedures, please call our Technical Department.

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