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# 1 SUBFLOOR PREPARATION

**DISCLAIMER:** Refer to page [25](#) 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 preformed on all concrete substrates, under in-service conditions.** It is recommended to turn on the HVAC unit prior to performing moisture testing, 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' (3.05 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, and 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 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 recommend 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 Alkalities](#).

## **1.2.2 PERFORMING A BOND TEST**

Bond tests are recommended to help installers assess adhesion strength in each 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.** Therefore results can vary. It is recommended to always follow the subfloor preparation guidelines, and to avoid only relying 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.
- 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. 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.  
**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. 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.**

**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 WITH 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 section 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 prep 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 ft<sup>2</sup> and one (1) test for every additional 1,000 ft<sup>2</sup> 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 ft<sup>2</sup> and one (1) test for every additional 1,000 ft<sup>2</sup> 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.**

- 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 must 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 aggressivity 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 [Section 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.

## 2 ATHLETIC SURFACING (VINYL SHEET GOODS)

(FOR VINYLSPORT)

**DISCLAIMER:** Refer to page [25](#) of this document.

### 2.1 SURFACE PREPARATION

#### 2.1.1 GENERAL CONTRACTOR

- a) **All subfloors must be properly prepared to provide a satisfactory bonding surface for the adhesive being used to install the resilient flooring. Refer to Mondo's current [Subfloor Preparation Guide](#) for all requirements.**
- b) The General Contractor must provide a finished concrete subfloor ready to receive Mondo's resilient vinyl flooring. 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, and 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 complete, you should have a CSP (Concrete Surface Profile) of about 1.**
- c) **New concrete subfloors must be allowed to cure a minimum of 28 days prior to installing Mondo flooring.** 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).
- d) Maintain a stable room and subfloor temperature prior to installation (before performing moisture tests), during the installation and min. 48 hours after the installation. Recommended temperature range of 65°F to 86°F (18°C to 30°C). General recommended ambient humidity control level is between 35 to 55%.
- e) 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 to ensure stable conditions during testing and installation. The pH level should be in the range of 7 to 10. Readings below 7 and in excess of 10 have been known to affect some adhesives. Moisture vapor emission content of the concrete slab must not exceed the tolerance of the adhesive specified when tested according to ASTM F1869 (anhydrous calcium chloride for moisture vapors from concrete), and relative humidity of concrete slab must not exceed the tolerance of the adhesive specified when tested according to ASTM F2170 (in-situ probes for relative humidity in concrete slab).

**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 WITH ASTM F2170 AND F1869.****2.1.2 FLOORING CONTRACTOR/SUBCONTRACTOR**

- a) Before proceeding with any work, the substrate surface must be inspected and any visible defects on the surface such as cracks, bumps, rough areas or variations in levelness must be reported in writing to the Project Manager and the General Contractor.
- b) The Flooring Contractor/Subcontractor must verify moisture testing results to ensure they are within tolerance for the adhesive specified. Refer to Mondo's Subfloor Preparation Guide for recommendations on moisture testing. The Flooring Contractor should keep records of all tests conducted.
- c) Concrete subfloors must be dry, sufficiently porous, smooth, 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 or reduce bond strength. Concrete surfaces that are powdery or scaly are not acceptable. **Mondo recommends the removal of contaminants by way of mechanical abatement, such as a light to medium shot-blasting (ICRI CSP #3 to #5 profile). NEVER use chemical abatement methods.** Ensure removal of contaminant was successful by performing a bond test, as described in Mondo's Subfloor Preparation Guide.
- d) 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.
- e) Store sheet goods upright on a clean, dry, flat surface protected from all possible damage and exposure to harmful weather conditions.

**2.2 VINYLSPORT INSTALLATION****2.2.1 ATHLETIC SURFACING (VINYL SHEET GOODS)**

- a) Do not install the vinyl flooring until all jobsite conditions and subfloor preparations are met and completed. Before starting any installation, verify the product for type, size, thickness, color, visual imperfections or color variations and notify the Mondo Technical Department of all apparent defects. **No claims will be accepted after the material has been installed.**
- b) Once the above steps have been completed, proceed to square the room and make the first chalk line down the center of the room parallel to the length of the room.
- c) Unroll material in the same direction and follow the numbered roll sequence. End seams should be staggered on the floor and overlapped approximately 6" (15 cm). (Review Typical Layout Diagram on page 17).
- d) Once unrolled, allow vinyl sheets to relax overnight. Colder facility temperatures may necessitate longer relaxation time.
- e) If a multiple color layout is to be made, double-checking measurements will avoid problems. Make sure that the seams between two colors will be in the middle of the painted game lines

(if applicable), whenever possible to do so. **FOR WOOD GRAIN FLOORING, MAKE SURE PATTERNS ALIGN.**

- f) Dry lay and rough cut all material to be installed on a given day prior to any adhesion.

**2.2.2 TROWEL SIZE**

Jobsite/substrate conditions will affect spread rate, it may be necessary to adjust trowel size or perform additional surface preparation. **It is recommended to change trowels every so often in order to assure the teeth are not worn out and that the adhesive spread is consistent throughout.**

Athletic Vinyl Flooring	Recommended Trowel*			
	Height	Width	Spacing	Notch
VINYLSPORT	1/16" (1.6mm)	1/16" (1.6mm)	3/32" (2.4mm)	U shaped

**2.2.3 RECOMMENDED ADHESIVES**

VINYLSPORT athletic surfacing products should be installed using Mondo’s **MP1000 Acrylic Adhesive**.

**WARNING: Mondo’s MP1000 adhesive cannot be used when installing over Everlay. The only suitable adhesive for installing Vinylsport over Everlay is the polyurethane Mondo PU 300.**

**WARNING: Do not install in temperatures below 65°F (18°C) or above 86°F (30°C).** Ambient temperature will affect the curing time of the adhesive. Lower temperatures will decelerate the curing time while higher temperatures will accelerate curing. Special care should be taken to accommodate ambient temperature to ensure proper transfer of adhesive.

**2.2.4 ADHESIVE APPLICATION**

- a) Refer to specified adhesive’s current **technical data sheet** for complete instructions on use.
- b) A **bond test** is recommended before proceeding with an installation to ensure good bond strength.

**2.2.5 ROLLED METHOD**

- a) **All VINYLSPORT seams will need to be heat welded. As such, installers will be using the under-scribe method for trimming seams.** Long seams (side seams) should be trimmed a minimum of 3/4" and end seams should be trimmed a minimum of 3".
- b) Roll back the material starting at one end (head seam) to approximately half of the roll length.
- c) Glue down entire row of material to subfloor before starting another row.
- d) When placing material **in wet adhesive**, frequently check for a good transfer of adhesive (90% minimum) to the back of the surfacing.
- e) To make perfect long seams, the first edge of the seam should be trimmed with the help of a chalk line and straight edge. Proceed to make a minimum 3/4-inch trim on the opposite piece

using an under scriber to make the seam suitable for heat welding later on. Set the under scriber to produce a net fit maximum 1/32" (1 mm) gap.

- f) To make perfect end seams, the **edges of the seam must be trimmed in** with the help of a straight edge. Proceed to make your 3" trim using under scriber.

**NOTE: A proper cut should be made in multiple passes.** The first pass should score through the wear layer using a utility knife. The second pass should be made using a sharp blade. Experienced installers may choose to use other types of cutting tools but end results should be the same as required.

- g) Manually work seams so that they are flat, flush and even.
- h) At the end of the day stop the installation at a seam.
- i) Use a lightweight 100 lbs (45 kg) roller to eliminate entrapped air, which could remain between the subfloor and the floor covering. Roll in multiple directions, first rolling across width then along the roll length.
- j) Remove any wet adhesive oozing from seams with denatured alcohol while the adhesive is wet. Dried adhesive residue will be extremely difficult to remove if not impossible. **DO NOT USE SOLVENT BASED PRODUCTS** as they could discolor the material.
- k) **WEIGHTS MUST BE APPLIED OVER EVERY SEAM.** Grey concrete utility bricks (2" x 4" x 8") are the only suitable weights. **DO NOT SUBSTITUTE WITH RED BRICKS.** Completely cover the seams for a minimal period of 24 hours. Weighting the seams with bricks will prevent them from peaking. However, immediately before putting the bricks down, the installers must manually work the seams (pressing down the seams or material edges with their fingers) in order to ensure there is no existing peaking prior to weighing, and that the seams are flush and flat. It is also necessary to brick the perimeter and all edges (doorways, walls, columns, sleeves, etc.).

**2.2.6 WEIGHT CHART FOR VINYL SHEET GOODS**

**Suggested Brick Quantities for Weighing Seams**

	VINYLSPORT
Long (Side) Seams	1 brick
Head Seams	1 brick

**NOTE:** The above listed quantities are merely suggestions. Specific site and environmental conditions could necessitate additional bricks on the seams. Enough bricks should be used to effectively keep the material flat in the adhesive for the required 24-hour period. Never use pieces of wood, boxes of other materials, sand bags, cinder blocks or any other substitute to weight the seams. **GREY CONCRETE UTILITY BRICKS, 2" X 4' X 8", ARE THE ONLY SUITABLE WEIGHTS.** Lack of weight on the seams while the adhesive is setting can result in peaking.

### 2.3 INITIAL USE AND MAINTENANCE

- a) **No foot traffic shall be allowed on the material for a period of 24 hours after the installation** and for a longer period if the temperature is below 72°F (22°C). Prohibit heavy traffic or rolling loads for a period of 72 hours. 1/8" Masonite or 1/4" plywood can be used to protect the material for the 24 to 72-hour period.
- b) Initial cleaning should only be performed a **minimum of 72 hours** after the athletic surfacing has been completely installed. Do not perform maintenance on newly painted game lines until a minimum of 7 days, and up to 30 days for scrubbing.
- c) Maintain vinyl athletic surfacing according to Manufacturer's current printed instructions for specified product.

**TYPICAL LAYOUT OF VINYL ATHLETIC SURFACING**

Roll no. 1	Balance of roll no. 4	Balance of roll no. 7	Balance of roll no. 9	Balance of roll no. 12	Balance of roll no. 15	Balance of roll no. 18	Balance of roll no. 20	Balance of roll no. 23
	Roll no. 5		Roll no. 10					
Roll no. 2	Roll no. 6	Roll no. 8	Roll no. 11	Roll no. 13	Roll no. 16	Roll no. 19	Roll no. 22	Roll no. 24
				Roll no. 14	Roll no. 17			
	Roll no. 7			Roll no. 20	Roll no. 25			
Roll no. 3	Roll no. 12	Roll no. 9	Roll no. 12	Roll no. 15	Roll no. 18	Roll no. 20	Roll no. 23	Roll no. 25
Roll no. 4								

### 3 ACRYLIC ADHESIVE MP 1000

**DISCLAIMER:** Refer to page 25 of this document.

#### 3.1 DESCRIPTION

Mondo MP1000 is a high performance, solvent-free acrylic-based adhesive specifically designed for the permanent installation of Mondo VINYLSPORT.

**NOTE:** Mondo polyurethane adhesive PU 300 is the only suitable adhesive for installing over Mondo Everlay.

#### 3.2 LIMITATIONS

**DO NOT USE** directly over moisture mitigation systems.

**DO NOT USE** over non-porous surfaces.

**DO NOT USE** over Mondo Everlay.

**DO NOT USE** outdoor.

**DO NOT USE** over a base that has been covered with or contains bond inhibitors (like paint, wax, dust, oil or grease, sealers or curing agents, surface hardeners, solvents, asphalt, old adhesive residue, etc.) **Contaminants are to be mechanically abated; use of abatement chemicals is not recommended.**

**DO NOT USE** on substrate with moisture vapor emissions higher than 5lbs/1,000ft<sup>2</sup> (2.27kg/93m<sup>2</sup>) in 24 hours (tested per ASTM F1869) or with relative humidity content above 85% (tested per ASTM F2170).

**NEVER** use over gypsum-based substrates.

**DO NOT USE** when the substrate temperature is below 50°F (10°C) or above 90°F (32°C).

#### 3.3 SURFACE PREPARATION

- a) **All subfloors must be properly prepared to provide a satisfactory bonding surface for the adhesive being used to install the resilient flooring. Refer to Mondo's current Subfloor Preparation Guide for all requirements.**
- b) Subfloors must be smooth and level within a tolerance of 1/8" (3mm) 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, and 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 complete, you should have a CSP (Concrete Surface Profile) of about 1.**

- c) **New concrete subfloors must be allowed to cure a minimum of 28 days prior to installing Mondo flooring.** 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).
- d) Maintain a stable room and subfloor temperature prior to installation (before performing moisture tests), during the installation and min. 48 hours after the installation. Recommended temperature range of 65°F to 86°F (18°C to 30°C). General recommended ambient humidity control level is between 35 to 55%.
- e) Concrete substrates must be fully cured and free of any hydrostatic and/or moisture problems. **Moisture and alkalinity tests must respect the specified adhesive's tolerances.** It is recommended to turn on the HVAC unit to ensure stable conditions during testing and installation. All testing must be performed using in-service conditions. The pH level should be in the range of 7 to 10. Readings below 7 and in excess of 10 have been known to affect some adhesives. **Moisture vapor emission content of the concrete slab must not exceed 5lbs/1,000ft<sup>2</sup> (2.27kg/93m<sup>2</sup>) in 24 hours** when tested according to ASTM F1869 (anhydrous calcium chloride for moisture vapors from concrete), and **relative humidity of concrete slab must not exceed 85%** when tested according to ASTM F2170 (in-situ probes for relative humidity in concrete slab).

**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 WITH ASTM F2170 AND F1869.**

- a) If installing over wood subfloors, 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). 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).
- b) 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.

### 3.4 MIXING

Mondo MP 1000 is ready to use.

**NOTE: In colder climates, if product received has frozen, you must allow it to thaw completely before mixing. See. 3.8 Protection.**

### 3.5 TROWEL SIZE

Jobsite/substrate conditions will affect spread rate, it may be necessary to adjust trowel size or perform additional surface preparation. **It is recommended to change trowels every so often**

to assure the teeth are not worn out and that the adhesive spread is consistent throughout.

Athletic Vinyl Flooring	Recommended Trowel*			
	Height	Width	Spacing	Notch
VINYLSPORT	1/16" (1.6mm)	1/16" (1.6mm)	3/32" (2.4mm)	U shaped

### 3.6 APPLICATION

- a) Refer to detailed [installation instructions](#).
- b) A [bond test](#) is recommended before proceeding with an installation to ensure good bond strength. Consult the Subfloor Preparation Guide.
- c) Use the recommended notched trowel with sufficient depth to ensure that at **least 90% of the adhesive transfers to the material backing**. Proper adhesive transfer to the material backing should be confirmed periodically by lifting the flooring material and inspecting its backing. Special care must be taken that the adhesive is not applied too thinly.
- d) **Do not spread more adhesive than can be covered within open time limitations of the adhesive.**

**NOTE: floor and ambient temperatures directly affects setting time: The warmer it gets, the faster it sets.**

- e) Immediately remove any adhesive spills as they occur (while the adhesive is still wet) using denatured alcohol. Dried adhesive residue will be extremely difficult to remove, if not impossible. **DO NOT USE SOLVENT BASED PRODUCTS, aside from denatured alcohol**, as they could discolor the material.
- f) Removed any entrapped air between substrate and flooring using the recommended method (refer to specified flooring’s current and detailed installation instructions).
- g) Because the instant grab of Mondo MP 1000 is low, grey concrete utility bricks (2” x 4” x 8”) should be used to cover every seam when installing Mondo sport products (for commercial flooring installations, oblong sandbags can be used if needed to address any challenging areas) in order to maintain contact between the material and the adhesive until it has fully set. See 3.7 [Physical Properties](#) below. **Mondo recommends leaving the weights on the seam for a period of 24 hours. Please refer to specified flooring’s current and detailed installation instructions).**
- h) **Do not walk over a newly laid installation before 24 hours** and do not allow heavy or rolling traffic before 72 hours. If needed, protect the installation with 1/8” Masonite or ¼” plywood.

### 3.7 PHYSICAL PROPERTIES

Open Time at 72°F (22°C) and 50% ambient humidity	15-30 minutes
Initial setting time at 72°F (22°C)	8 hours
Final setting time at 72°F (22°C)	24 hours
Freeze/thaw stability at 0°F (-18°C)	Stable 5 cycles

Flash point (water based product)	>100C (>212°F)
Flammability Part A	Not Flammable
Maximum Moisture Vapor Emissions Tolerance (ASTM F1869)	5lbs/1,000ft <sup>2</sup> /24hrs or less
Maximum Concrete Relative Humidity Tolerance (ASTM F2170)	85% or less
Cleaning (while adhesive is still fresh)	Denatured alcohol
Color	Off-white
Consistency	Buttery
Format*	4 US gal. pail (15.14L)

\*Shelf life is approximately 12 months from date of manufacturing, so do not store adhesive for extended periods of time after delivery from supplier. It is recommended to always store adhesive in its original container, at room temperature and in a dry heated area. NOTE: Product will skin over if container is left open for too long.

### 3.8 PROTECTION

- a) Protect containers from freezing in transit and storage. This product is freeze/thaw stable (5 cycles) at temperatures down to 0°F (-18°C). However, it is recommended to protect all adhesives from freezing. **If frozen, do not stir until material has completely thawed. Once thawed, gently stir to homogenize.**
- b) Ensure climate-controlled storage on site, inside the range of 40°F to 100°F (4°C to 38°C) Deliver all materials a minimum of 24 hours before work is scheduled to begin.
- c) **No foot traffic for a minimum of 24 hours after installation and no heavy or rolling loads (wheels, carts, etc.) for a minimum of 72 hours in order to allow proper adhesive set-up and curing.** Failure to follow this recommendation can lead to dispersion of adhesive under the flooring prior to proper setting and can result in unwanted air pockets and bubbles.

**NOTE: Refer to material safety data sheets (MSDS) for more information regarding use, application, limitations and safety.**

## 4 HEAT WELDING

**DISCLAIMER:** Refer to page 25 of this document.

**NOTE:** VINYLSPORT athletic vinyl sheet goods must be heat welded at each seam. If you have never heat welded vinyl floor covering before, you should not attempt to do so without adequate training and/or qualified supervision on site. Call Mondo's Technical Department for further details.

### 4.1 CUTTING SEAMS FOR HEAT WELDING

- a) Heat welding can only be performed a minimum of 24 hours after gluing down the material.
- b) Seams must be straight to achieve a proper weld.
- c) Seams are fitted using an under scribe or may be cut with a seam cutter for heat welding. Set the under scribe to produce a net fit maximum 1/32" (1 mm) gap. Seams can be routed with an electrical groover or by hand using a straight edge and hand groover.
- d) **Important:** Ensure a consistent and accurate gap in all seams; leave the proper space for the guide of the electrical groover. Trim off material at scribe mark with a sharp blade, when using an under scribe. Use sectional roller or steel hand roller and go over the seams to ensure a flush seam before heat welding.
- e) End seams are treated following the same recommendations as for the side seams. However, material wound up at the inside of a roll may require the end to be back rolled and/or heated with a hot air gun to relax any curling.

### 4.2 SEAM GROOVING

- a) Before the electric grooving machine can be used, each end of the seam must be hand grooved with the hand grooving tool for approximately 6" (15 cm) to 8" (20 cm). **It is recommended that a trial run be made on two pieces of scrap flooring fastened with double face tape (to simulate a seam) before grooving actual seams.** Set blade depth equal to 2/3 of the material or wear layer thickness.
- b) Seams can be routed with an electrical groover or by hand using a straight edge and hand groover.
- c) **Caution:** Never adjust blade when machine is turned on or plugged into an electrical outlet. Place the grooving machine on floor in the hand grooved area, lining up the front guide and the back wheel in the groove. Turn on and begin pushing the machine along the seam. Do not apply excessive pressure.
- d) Inspect the depth of the groove after a few feet of operation and adjust if necessary. Use only the tapered type blade in the electric router.
- e) The width of the groove should equal approximately 2/3 of the width of the weld rod itself. Mondo vinyl weld rod is approximately 4 mm thick.

### 4.3 HEAT WELDING PROCEDURE

- a) If you have never heat welded Mondo vinyl floor covering before, then get training and do multiple practice seams on scrap material.
- b) Verify that the weld rod on the job site corresponds to the specified color.
- c) Routed seams must be free of dirt, adhesive and any other foreign particles before they are heat welded. Seams that cannot be welded the same day but have already been routed should be protected to keep them clean.
- d) Clean seam area thoroughly with a vacuum cleaner or soft brush.
- e) To determine the correct temperature setting on your heat welding gun and the correct pace, practice on a piece of scrap flooring until you are comfortable.
- f) Cut a sufficient amount of welding thread to seal approximately half of the seam length.
- g) Fasten a 5/32" (4 mm) nozzle to the tip of the heat welding gun.
- h) Position excess thread so it will not interfere with the application. Insert welding thread approximately 3" (7.6 cm) out through the hole in the welding nozzle. Hold the extended thread and immediately begin sealing the seam. The proper angle for heat welding is achieved when the tip of the welding nozzle is parallel to the flooring and not tilted to the right or left side of the seam.

**NOTE: Do not touch the nozzle or barrel of welding gun as it is very hot and a burn may result.**

- i) Pull the heat gun towards you, allowing the welding thread to feed through the nozzle. Approximately 2/3 to 1/2 of the welding rod thickness will bond in the seam. The excess will be trimmed off when cooled. Moving at too fast a pace will result in poor adhesion of the weld to the seam. Too slow a pace will melt the weld rod and can lead to difficulties in skiving/trimming afterwards. A slight melting (small bead) of the thread on each side of the seam indicates the proper angle and speed.
- j) Continue welding the seam up to the end of the precut thread.
- k) Use the trim knife and trim off approximately 3" (7.6 cm) at the end of the heat welded thread flush with the flooring surface. This will allow for an easy overlap where the second half of the weld is fused to the remaining seam length.
- l) Cut an additional length of thread to complete the remaining length. Start at the wall and work toward the center. Overlap approximately 3" (7.6 cm) where second length of weld joins the first.
- m) Trimming off the welding thread is accomplished in **two steps**. The first step will remove most of the excess. The second step is the final trim.
- n) Attach the trim plate to the quarter moon trim knife or Mozart and remove 2/3 of the heat welded thread while the rod is still warm.
- o) Use the quarter moon trim knife (without trim plate) or Mozart to remove the remaining welded thread protruding above the surface of the flooring at the seam once the rod has fully cooled. Apply moderate and continuous steady pressure while trimming the thread.

**Note: Inspect the seam after final trim. Re-trim any high areas carefully to avoid any damage to damage the flooring. Any spots where welded thread shows evidence of an incomplete seal, the seam should be re-welded.**



## **DISCLAIMER**

These instructions conform to commonly accepted installation techniques and practices 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 and that are referenced in these instructions, nor for any adverse handling, climatic or environmental conditions that may affect such installation.

The above 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.

**NOTICE: We shall not be liable for incidental and consequential damages, as defined under the uniform commercial code, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other than the intended use. Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. Our liability is expressly limited to replacement of defective goods. Any claims shall be deemed waived unless made in writing to use within thirty (30) days from date it was or reasonably should have been discovered.**

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

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