

12 POLYURETHANE ADHESIVE (PU 105)

DISCLAIMER: Refer to page [5](#) of this document.

12.1 DESCRIPTION

PU 105 is a high performance two-part polyurethane adhesive for both indoor installations of Mondo rubber and PVC floor covering and outdoor installations of Mondo rubber surfacing only over concrete. It has excellent resistance to moisture, heat and water, plus outstanding adhesion at low temperatures.

NOTE: For installations over asphalt, the ONLY suitable adhesive to use is Mondo PU 100. **DO NOT USE PU 105 OVER ASPHALT.** Call the Mondo Technical Department for asphalt preparation recommendations.

NOTE: Mondo polyurethane adhesives like PU 100 and PU 105 are the only suitable adhesives for installing over Mondo Everlay.

NOTE: Mondo polyurethane adhesives like PU 100 and PU 105 are the only suitable adhesives to use when the area to be installed will be subject to falling impacts, such as free weights/dumbbells.

12.2 LIMITATIONS

DO NOT use PU 105 over asphalt.

DO NOT USE on substrate with moisture vapor emissions higher than 5lbs/1,000ft² (2.27kg/93m²) in 24 hours (tested per ASTM F1869) or with relative humidity content above 85% (tested per ASTM F2170).

DO NOT USE when the substrate temperature is below 50°F (10°C) or above 86°F (30°C).

If you have a gypsum based substrate, you must communicate with Mondo's Technical Department for all recommendations prior to use.

12.3 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) The General Contractor must provide a finished concrete subfloor ready to receive Mondo's resilient rubber flooring. 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, 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.

- 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) Flooring installation shall not commence until the building is enclosed and all other trades have completed their work.
- e) 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%.
- f) 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 5lbs/1,000ft² (2.27kg/93m²) 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 TO ASTM F2170 AND F1869.

- g) 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).
- h) 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.

12.4 MIXING

NOTE: In colder climates, if product received has frozen, you must allow it to thaw completely before mixing. See. [12.8 Protection](#).

- a) Create a mixing station by selecting a location, away from the installation area, and protecting it with a 6' x 6' scrap piece of material, Kraft paper or other suitable product. Mondo reactive adhesives consist of two parts and the proportions for the mix are ready to use. Pour the small container of part B in the large pail of part A and stir thoroughly with a **variable speed** mixer (6 amps minimum) until a homogeneous and smooth consistency is obtained. **The complete contents of both parts of the adhesive must be used at once.** Improper mixing may result in a poor bond. Using a variable speed mixer should not take longer than 2 minutes to mix the two parts to a creamy texture. Over mixing will cause the catalyst to set up too fast, thus reducing pot life and entrapping air which may reduce bond performance. **The adhesive has to be applied immediately after mixing, otherwise it will thicken and be much harder to trowel.** The flooring must be installed while the adhesive is wet. The mix must be used within 60 minutes.

12.5 TROWEL SIZE

Trowel size must comply with listed recommendations for the specified flooring product to be installed. See appropriate section of Mondo Installation Manual for product trowel size or consult Mondo's Technical Department for additional support.

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.**

12.6 APPLICATION

- a) **Refer to specified flooring's current and 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 with material within 30 minutes.**

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** 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 PU 105 is low, grey concrete utility bricks (2" x 4" x 8") should be used to cover every seams when installing Mondo sport products. **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. For commercial flooring installations, if necessary, apply a small grey concrete utility brick or small oblong sandbag over seams or areas that need assistance to remain flat into the adhesive while it sets. (Note: commercial sheet goods may retain a small percentage of curl from wrapping around the core, so it is often recommended to apply weights on any head seams that do not lay flat on their own during adhesive curing to ensure best results. Weights must be kept on a minimum of 12 to 24 hours, depending on site temperature and adhesive curing. Please refer to specified commercial flooring’s current and detailed installation instructions).

- h) **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.

12.7 PHYSICAL PROPERTIES

Open Time at 72°F (22°C) and 50% ambient humidity	60 minutes
Initial setting time at 72°F (22°C)	7 hours
Final setting time at 72°F (22°C)	24 hours
Freeze/thaw stability at 0°F (-18°C)	Stable 5 cycles
Flammability Part A	>61°C (>142°F)
Flammability Part B	>87°C (>187°F)
Maximum Moisture Vapor Emissions Tolerance (ASTM F1869)	5lbs/1,000ft²/24hrs or less
Maximum Concrete Relative Humidity Tolerance (ASTM F2170)	85% or less
Cleaning (while adhesive is still fresh)	Denatured alcohol
Color	White/Cream
Consistency	Buttery
Format*	1.98 US gal. pail (7.5L)

*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.

12.8 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.**
- b) Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

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

THIS PRODUCT IS NOT CONTROLLED UNDER THE CANADIAN REGULATION WHMIS. CONTENT: NJ TNRN 930 – This product does not contain any chemicals reportable under American Federal OSHA 29CFR 1910.1200.

KEEP OUT OF THE REACH OF CHILDREN.

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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