

# **Installation Guidelines**

## **For**



# **Indoor Rubber Flooring**

## **Square Cut Glue Down**



This product has been certified by SCS to meet the rigorous indoor air quality requirements of the FloorScore® certification program.

**The following pages are guidelines, if not followed, warranty will be voided. Please read this manual thoroughly before installing Dinoflex Recycled Rubber Surfacing products.**

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## **SECTION I – GENERAL INFORMATION**

- This installation method and mat format is a must for all areas in extreme temperature and humidity change, or where surface moisture may be present after installation, i.e. ice arenas, locker rooms and entry ways.
- Product Information:
  - Thickness tolerance of  $\pm 0.5\text{mm}$
  - Dimensions:  $38'' \times 38'' = 10.02 \text{ ft}^2$  (96.5cm x 96.5cm) Dimension tolerance of  $1/8''$  (3.2mm)

## **SECTION II – MATERIAL STORAGE & HANDLING**

### **General Information:**

- All Dinoflex products are packaged on wooden pallets, covered with a plastic cozy, and secured by metal strapping. (image below does not include metal strapping)



### **Receipt of Merchandise:**

- It is recommended you double-check your order is correct.
- Inspect for any damage that may have occurred during transportation.
- Identify any other possible shortcomings.
- For your own protection, ensure that defective product is identified prior to the start of the installation.
  - Notify your sales rep regarding any defective product immediately.
- Dinoflex is not responsible for any installation costs that occur because of defective product being installed.
- If adhesives were exposed to freezing temperatures, place indoors and bring to room temperature between  $14^{\circ}\text{C}$  ( $57^{\circ}\text{F}$ ) and  $23^{\circ}\text{C}$  ( $72^{\circ}\text{F}$ ) before using.
- Read technical data sheet and SDS for adhesive.

### **Storage**

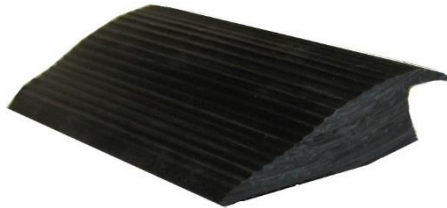
- Store product in a dry and clean area.
- Before placing any Dinoflex product in storage remove the pallet strapping.
- Leave plastic cozy on during storage.
- Adhesive must be stored above  $18^{\circ}\text{C}$  ( $65^{\circ}\text{F}$ ) in a dry heated space.

### **SECTION III – TOOLS & ACCESSORIES**

#### **Tools and Safety Equipment**

- Dinoflex Installation Guidelines – installation video available at: <https://www.youtube.com/watch?v=VX6Aiz7vakc>
- A two-person installation is required for large areas (one to handle materials and one to handle adhesive).
- Safety glasses
- Rubber gloves and boots
- Heavy duty utility knife
- Measuring tape
- Transit level and straight edge
- Chalk snap-line
- 1/16" x 1/16" x 1/16" V- Notch Trowel
- Carpenter's square
- Putty knife
- Masonite board, plywood or kraft paper
- 858ml adhesive caulking gun, if needed to adhere reducer strip
- 50lb or 70lb roller depending on thickness

#### **Reducer Strips:**



#### **Sizes:**

- 5/16" (8mm) x 12' length
- 3/8" (10mm) x 12' length
- 1/2" (12mm) x 12' length

#### **Adhesive:**

- Varying temperature ranges will affect curing times, viscosity and pot life of adhesive, possibly resulting in adhesion problems.
- Use safety glasses, rubber boots, and rubber gloves when applying adhesive. Do not allow adhesive to cure on your hands.
- Room must be well ventilated.
- For first aid and safety instructions see labels on can and the safety data sheet.
- If adhesives other than the products listed below are being used, this could void the warranty. Contact Dinoflex for verification.
- For detailed information and product use, refer to Technical Product Data Sheet, included and adhesive.

#### **DinoGrip Adhesive (V.O.C. compliant)**

- Single component polyurethane adhesive
- 4 US gallons: 57lbs (25.8kg)
- Approximate coverage: 400ft<sup>2</sup> (37.16m<sup>2</sup>)
- 1/16" V-notched trowel supplied.
- 12-month shelf life

### **Chemrex Urethane 948 (V.O.C. compliant)**

- Single component polyurethane adhesive
- 858ml gun grade: (29oz tube)
- Approximate coverage:
  - 1/8" (3mm) bead = 345 lineal feet
  - 3/16" (5mm) bead = 153 lineal feet
  - 1/4" (6mm) bead = 86 lineal feet
  - 5/16" (8mm) bead = 55 lineal feet
  - 3/8" (10mm) bead = 40 lineal feet
- 12-month shelf life
- It is not uncommon for a moisture cure urethane product to develop a slight skin on the top surface in the can.
- The product is still good; simply remove the skin and mix adhesive well.
- Refer to batch number on adhesive and contact Dinoflex to determine if it has expired.
- Dinoflex is not responsible for adhesive used past its expiration date.

### **SECTION IV –SUB-SURFACE**

#### **Preparation of the Sub-surface**

- The sub-surface must be flat/smooth, clean and dry, structurally sound and all debris including old adhesive must be removed.
  - Scraping may be required to remove debris.
- Expansion joints in the concrete are designed to allow for expansion and contraction of the concrete. If a floor covering is installed over an expansion joint, it will likely fail in that area. Use expansion joint covers designed for resilient flooring.
- Particleboard, chipboard, Masonite, and Lauan Plywood are not considered suitable underlayment.
- If installing on an incline surface, start at the bottom and move up the surface to avoid sliding of the mats.
- Debris left under mats will cause height variations, telegraphing and undulations.
- If the sub-surface has been previously sealed or finished the surface may need to be stripped and cleaned to ensure an adequate bond.
- Petroleum distillates (e.g. solvents) as well as liquid animal fats may cause the surface bonding to fail. Test results for other harmful chemicals and compounds may be available on request.
- Contact Dinoflex for verification.

#### **Concrete Sub-Surface**

- New concrete sub-floors must be thoroughly cured and free from hydrostatic pressure (a minimum of 30 days after pour).
- Consult adhesive specifications for allowable moisture tolerance.
- Concrete substrates should not exceed 90% RH and/or 5lbs x 24-hours x 1000 sq. ft.
- It is essential that pH tests be taken on all concrete floors. This must range between 7 and 9. If it does not, the sub-floor must be neutralized prior to the beginning of the installation. **These tests must be documented.**
- Moisture vapor emissions test in accordance to ASTM F1869 and relative humidity in concrete test in accordance to ASTM F2170 must be completed.
- Sub-surface must be smooth and level to a tolerance not exceeding 1/8" in 10 lineal feet.
  - The Concrete Surface Profile (CSP) must achieve a requirement of CSP2.

- If existing concrete is too rough, or does not meet the above criteria, apply a Portland cement based leveling compound to smooth and level the surface. Follow all leveling compound manufacturer's instructions.
- Moisture is the single most significant factor that causes bonding failure to the sub-surface.
- Warranty is not applicable if specified moisture ranges are not adhered to.

### **Wood Sub-Surface**

- Wood sub-surface must be a minimum of 1" thickness, and free from any flex movement. (5/8" on joists with a 3/8" overlay is acceptable).
- New plywood should be acclimatized for a 48-hour period prior to installation of the rubber flooring.
- CDX exterior smooth one side is suggested for new wood substrates.
- Secure all nails and screws to prevent future protrusion.
- Any cracks, holes, rough or uneven areas should be patched with a polymer-modified cement leveling compound and/or sanded to achieve a smooth surface.
- It is vital that a moisture test be completed prior to installation with records kept. No less than 20 spot checks per 1000 sq. ft. should be observed. Any readings higher than 13% are not acceptable and installation must wait until levels are at or under 13%.
- Moisture is the single most significant factor that causes bonding failure to the sub-surface.
- Warranty is not applicable if specified moisture ranges are not adhered to.

### **Hazards**

- **Silica Warning:** Concrete, floor patching compounds, toppings, and leveling compounds can contain free crystalline silica. Cutting, sawing, grinding, or drilling can produce respirable crystalline silica (particles 1- 10 micrometers). Classified by OSHA as an IA carcinogen, respirable silica is known to cause silicosis and other respiratory diseases. Avoid actions that may cause dust to become airborne. Use local or general ventilation or provide protective equipment to reduce exposure to below the applicable exposure limits.
- **Asbestos Warning:** Resilient flooring, backing, lining felt, paint, or asphaltic "cutback" adhesives can contain asbestos fibers. Avoid actions that cause dust to become airborne. Do not sand, dry sweep, dry scrape, drill, saw, bead blast, or mechanically chip or pulverize. Regulations may require that the material be tested to determine the asbestos content. Consult the document "Recommended Work Practices for Removal of Existing Resilient Floor Coverings" available from the Resilient Floor Covering Institute.
- **Lead Warning:** Certain paints can contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, and local laws and the publication "Lead Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing" available from the United States Department of Housing and Urban Development.

## **SECTION V – PRE-INSTALLATION**

### **General Information**

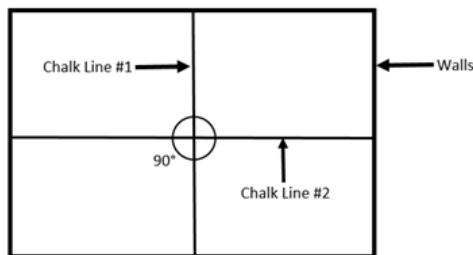
- Prior to installing Dinoflex Recycled Rubber Flooring, ensure all other trades have completed their work schedules.
- The use of Masonite board, plywood or kraft paper should be used to protect the rubber flooring from damage and debris.
- Product, sub-floor and adhesive must be of the same temperature. This should be checked using an infrared digital thermometer.
- Dinoflex is not responsible for any product failure if proper floor preparation and/or installation procedures are not followed.

- Check ambient temperature.
- All HVAC systems must be fully operational 24-hours prior to beginning the acclimation process.
- Rubber flooring may be installed between temperatures of 14°C (57°F) and 23°C (72°F).
  - Room temperature must be consistent during the entire installation.
  - Large fluctuations in temperature or humidity will cause expansion or contraction.
- In-floor radiant heat should be shut off for 24-hours prior to acclimation (72-hours prior to installation), be shut off throughout installation and remain off for 72-hours after installation is complete.
  - It is recommended that surface temperature does not exceed 25°C (77°F)

### Chalk Lines

- Locate the midpoint of the room, chalk a start line down the center. Chalk another similar start line 90° to the first one. (Figure 1)

Figure 1



### Mat Layout

- Each mat is marked with a label stating:
  - **This Side Down** do not remove these labels until final glue down commences.
  - Make sure that all mats are laid down with the “label” pointing in the same direction. (I.e. Bottom right corner)
  - Install mats same side up as received, **Do Not Flip Over** (I.e. sticker bottom right)
- The installer should have all relevant information about the mat arrangement from the owner.
- Begin mat layout from the point where the two chalk lines intersect.
- Work outwards in both directions.
- Start second row on either side of the center line towards the chalk line.
- Make sure that second row is installed by staggering mats.
  - This will avoid any four corners from meeting at one spot. (see figure 2)

Figure 2



## Acclimation and Dry Lay

- ***Acclimation/Dry Lay Checklist is required to be completed or warranty will be void.***
- A minimum of 48 – 72 hours before starting the installation.
  - Storage longer than 2 weeks will require a longer acclimation period.
  - Mats in the lower portion of the stack will compress to a greater degree than those in the upper portion.
  - A mat laid down in the morning hours at 0°C (32°F) would be a different size than a mat laid at 20°C (68°F) later in the day.
  - Acclimation should only begin once the sub-surface has reached a temperature between 14°C (57°F) and 23°C (72°F).
- Lay out all mats on the sub-surface in piles of 2 or less:
  - Be sure to mix mats from several different pallets to blend minor shade variations.
  - Allow them to acclimate until they have reached a consistent size.
    - Some products under certain conditions have shown expansion and contraction in size of up to 1/8" (3.2mm).
  - Check for any shading or uneven color distribution.
    - This is not considered to be a product defect.
    - Rotating the mat 90° or installing it in a less visible area may help improve the effect.
  - Inspect all mats for visible defects.
    - Ensure the defective product is identified prior to the start of the installation, notify Rep/Dealer immediately.
      - Labor will not be covered if any defective product is installed.
    - Scythe marks are inherent in the manufacturing of recycled rubber flooring products and are considered normal.
    - Certain lighting conditions can accentuate these marks and as such is not considered a product defect.

## Cutting

- Lay mat on a flat surface, hold the metal straight edge on the cut line, and cut with sharp utility knife.
- Keep scoring the cut until separated.
- Change or snap off blades frequently to ensure clean cuts.
- For odd angles, circular patterns, etc. a cardboard template is suggested.
- Join factory edges together. Hand cut edges should be used against the perimeter walls only.

## **VI – INSTALLATION**

### **General Installation Information**

- **Do not install** the mats if they are not square and the appropriate thickness has not been reached.
- Intended for indoor use only and should not be installed in areas where the temperature is inconsistent.
- Glue down installation is required for all square edge mats.
- Refer to adhesive label for working time.
- Ensure to work in small areas, 2-3 mats at a time so the adhesive does not set or skin over before laying the mat.
- Avoid uneven spreading or the use of a larger trowel. Excess adhesive can result in adhesive coming up between the seams.

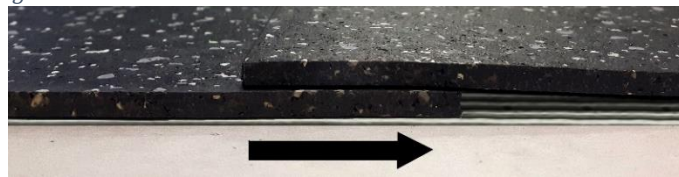


- Remove excess adhesive from the sub-floor within 10 minutes with a putty knife so it does not cure. Cured adhesive on an adjacent row will cause height variations.
- Tape is not required; certain tapes will leave residue and cannot be removed from the top surface without possible damage.
  - Low tack painters' tape can however be used but needs to be removed immediately after install.
- Attach reducer strip to mats with Chemrex adhesive or caulking if needed.

### Mat Installation

- Put the mat that you are installing on top of the mat already glued down and pull towards the area you want to fill until the mat falls into place, then firmly press the mat up to edge of the existing mat.
  - Over compressed seams will cause peaking, care should be taken when compressing seams.
- This will keep excess adhesive from protruding between the seams. (see figure 3)

Figure 3



- Leave ¼" gap to all walls for mat expansion.
  - Allow 72-hours setting time before post install cleaning.
  - Avoid heavy traffic or rolling loads during curing to prevent indentation or movement of mats.
  - Never leave adhesive ridges or puddles. They will telegraph through the material.

### Clean Up Adhesive

- Do not get adhesive on the top surface of the rubber flooring as it is impossible to remove when cured.
  - Immediately use a clean damp cloth to remove any adhesive.
- Dinoflex does not warranty product where the attempt to remove adhesive has been made. Any damage to the mat because of adhesive removal is solely that responsibility of the installer.
- Contact your Dinoflex supplier immediately for suggested cleaning methods if this happens.
- Caution: the use of mineral spirits can cause the area to appear darker.
- Intense scrubbing of the seams will also darken the edges.

### General Logo Information

- All logos are assembled at the factory prior to being shipped to ensure a precise fit has been achieved.
- Logos do not ship assembled.
- Logo pieces are labelled and supplied with reference graphic for installation.
- Use care when handling logo pieces to protect them from damage or loss.
- Logos are packaged depending on size:
  - One mat logos are usually packaged in a separate box.
  - Larger logos are packaged on top of the pallet.
  - Smaller pieces are always packaged separately in either a plastic bag or small box.

## **Logo Installation**

- Before starting the logo installation, confirm required logo location from site drawings or by confirming with building owner.
- Acclimate and Dry Lay as per guidelines previously mentioned above.
- While Acclimating and Dry laying tape all logo piece in place. (low tack painters' tape may be used to hold pieces in place during this step, but tape must be removed immediately after logo is installed).
- Carefully remove logo and place to the side.
- Spread adhesive in area of logo placement as per the logo layout as directed above.
- Be extremely careful not to use too much adhesive, as it could seep through the small piece seams onto surface of the logo mat. Do not get adhesive on the top side of any logo pieces.
- If adhesive does get on the top side of the logo immediately wipe with a clean damp cloth.
- Carefully place background mat and logo pieces into place, starting with larger pieces.
- Gently adjust pieces to ensure a good fit.
- Continue to install surrounding floor, being careful to protect logo from all traffic.
- Cover with Masonite board, plywood or kraft paper until the remainder of the installation is complete.

## **Rolling**

- Roll each row as completed or within 15 - 20 minutes. Also roll the entire area at the end of each day
- Work in all directions. North to South and East to West.
  - Do not twist or pivot the roller or your feet as it will stretch the mats, roll in a long straight line.
  - Adhesive is slippery when first spread and mats can shift position even if only slightly.
  - Too much rolling or too heavy of a roller could cause the mats to buckle and adhesive to move upwards through the seams.
  - Furthermore, stretching of the rubber flooring can eventually lead to gaps between the mats.
  - Roll slowly, rolling too quickly could affect the bond of the adhesive.
  - Do not roll right along edge of mat, always try to overlap on the seams.
- No foot traffic of any kind should be allowed for the 48-hours, allow 72-hours for maximum strength.
- When rolling a logo, place a piece of Masonite board or plywood overtop to stop small pieces from moving.
- Roller Guideline:
  - 5/32"-1/4" (4mm-7mm) mat thickness – use 50lb roller
  - Thicker than 5/16" (8mm) mat thickness – use 70lb roller

## **VII – CLEANING**

### **Post Installation Cleaning**

- When installation is complete, and adhesive is fully cured (at least 72-hours).
  - Sweep floor to remove any debris, then dust mop thoroughly to remove all surface dust and dirt using a dust mop or microfiber mop.
  - Use a neutral PH Cleaner or DinoClean. (see dilution rates on label).
  - Do not use any oil base cleaners as they will deteriorate the mats.
  - Damp mop with DinoClean Concentrated Recycled Rubber Floor Cleaner diluted with a warm water; use a microfiber mop.
    - Use a two-bucket system and change the water frequently.

- If floor has an excessive amount of dirt or dust present, additional cleaning with a lightweight auto scrubber may be required.
  - An RPM of 185 and brush pressure between 35 and 85lbs are recommended.
  - If disc type equipment is used, be sure to use a soft nylon brush, not a pad.
- Do not flood floor.
- Allow to dry thoroughly.
- Apply a treatment of DinoCoat according to instructions provided by Dinoflex if desired.

## **VIII - FLOOR TREATMENT**

### **Recycled Rubber Treatment**

- Please note that treating recycled rubber is not required for all applications.
- Mats with a predominance of light-colored EPDM will be easier to clean and maintain if treatment is applied.
- Contact your Dinoflex Supplier for the correct choice in your application.
- For most installation, it is not necessary to seal or coat Dinoflex Recycled Rubber Mats.
- In certain installations, a treatment may be appropriate.
- DinoCoat is recommended to improve the visual effects of shade variation and uneven distribution of color granules.
- Application Guide:
  - Preparation:
    - Ensure floor has been completely cleaned and free of any dust, dirt or debris.
    - Ensure floor is completely dry before applying DinoCoat
    - Isolate or close off area(s) that will have DinoCoat applied
    - Line mop bucket with garbage bag to eliminate DinoCoat from entering the bucket and eliminate the possibility of foreign substance or unwanted chemicals
  - Applying DinoCoat:
    - Pour DinoCoat into a bucket, using a roller or microfiber mop and slightly wringing it out so the mop is fully saturated but not dripping.
    - Apply a thin coat starting at the entrance way and outline the room along the baseboards, do a 180° turn back to the 3<sup>rd</sup> wall and cover the rest of the area working back and forth. (See below image)
    - Set up all caution/wet floor signs to ensure there is no traffic on floor while DinoCoat is drying.
    - DinoCoat must be completely dry before applying subsequent coats (minimum 1 hour). Drying times will vary with temperature, humidity and ventilation.
    - When applying second coat, be sure to move in opposite direction from first coat.
- DinoCoat is recommended to improve the visual effects of shade variation and uneven distribution of color granules.

