



## **INSTALLATION / MAINTENANCE GUIDELINES** **SQUARE CUT / GLUE DOWN**

- **DUO TILE**



**Square Cut Glue Down Installation**



Reg # SCS-FS-02144b

**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 only... please read this manual thoroughly before installing Mats Inc. Recycled Rubber Surfacing products.

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# **TABLE OF CONTENTS**

<b><u>SECTION</u></b>		<b><u>PAGE</u></b>
<b>PRODUCT</b>		
I	MATERIAL STORAGE & HANDLING	3
II	TOOLS & ACCESSORIES	4-5
<b>INSTALLATION</b>		
III	BEFORE STARTING INSTALLATION	5
IV	PREPARATION OF SUB-SURFACE	5
V	INSTALLATION OF SQUARE CUT TILES	5-7
<b>MAINTENANCE</b>		
VI	CLEANING & MAINTENANCE	8
<b>GENERAL</b>		
VII	LOGO INFORMATION	9
VIII	WEIGHTS & MEASURES	10

## SECTION I

### MATERIAL STORAGE & HANDLING

#### General packaging information

All Mats Inc. products are packaged on wooden pallets, covered with a plastic hood, and secured by steel strapping.

#### On receipt of merchandise:

**A)** The product in front of you has gone through several quality assurance checks. However, we recommend that you double-check that your order is correct, that no damage occurred during transport, and for any other possible shortcomings. For your own protection, ensure that defective product is identified prior to the start of the installation. Please note that we are not responsible for any installation costs that occur as a result of defective product being installed.

**B)** If adhesives were exposed to freezing temperatures, place indoors and bring to room temperature before using. Read technical data sheets and material safety data sheets for adhesive. Check adhesive cans for damage that may have occurred during transit.

**C) Storage:** Store tiles in a dry and clean area. Temperature and humidity changes will cause the rubber to expand or contract.

**D) Installation after short term storage:** At least 24 hours before starting the installation lay out all tiles on the sub-surface to allow them to acclimate. A tile laid in the morning hours at 32°F (0°C) would be a different size than a tile laid at 68°F (20°C) later in the day. Acclimation is complete when the products have reached their specified dimensions. Refer to the Weights and Measures chart at the back of these guidelines. Short term storage should be considered as two weeks or less.

**E) Installation after prolonged storage:** During prolonged storage, the tiles in the lower portion of the stack will compress to a greater degree than those in the upper

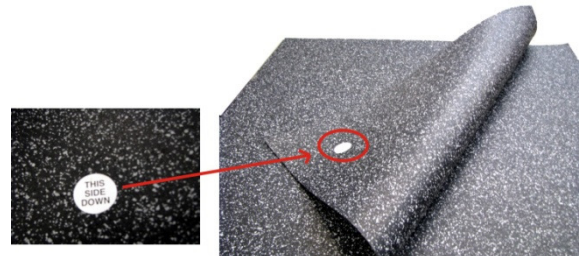
portion. This will show as thickness variations in the products taken from the top of the pallet as compared to those on the bottom. Product dimensions (length and width) may also be affected. A longer acclimation time will be required for product that has had a longer storage time. Exactly how long is very difficult to predict but can take upwards of 48 – 72 hours. The product should be taken off the pallet and distributed throughout the installation area in small piles consisting of three or less tiles. Acclimation is complete when the products have reached their specified dimensions; check length, width, and thickness periodically until the right dimensions have been reached (see the Weights & Measures chart at the back of these guidelines). **Do not install** the tiles if they are not square and the appropriate thickness has not been reached.

**F)** It is important to keep a clean working surface at all times. Protect tiles from dust and dirt.

**G)** Keep Mats Inc. rubber surfacing dry. Moisture will cause adhesion problems.

**H)** Petroleum distillants (e.g. solvents) as well as liquid animal fats may cause the surface bonding to fail. Test results for other harmful chemicals and compounds are available on request.

**I)** Install rubber tile flooring same side up as received. Reversing tiles may result in visible shade differences in finished surface. There is a sticker on the back of each tile stating: **THIS SIDE DOWN**. These stickers are always placed in the same corner of each tile.



**DO NOT REMOVE THESE STICKERS DURING THE ACCLIMATION PROCESS. THEY SHOULD NOT BE REMOVED UNTIL ACTUAL GLUING COMMENCES.**

## SECTION II

### TOOLS & ACCESSORIES

#### A) Tools and safety equipment required:

- Mats Inc. Installation Guidelines
- Safety glasses
- Heavy duty utility knife - Suggested product: CH Hanson Speed Rocker SS, 3 position, fixed blade knife (www.chhanson.com)
- Measuring tape
- Transit level and Straight edge
- Caulking gun, if needed to adhere reducer strip
- Chalk snap-line
- Drill and mixer for adhesive
- V-notched trowel 1/16" (1.6 mm)
- Carpenter's square
- Rubber boots & gloves

#### B) Reducer strips

##### Sizes:

- 5/16" – 3/8" (8 mm – 10 mm)
- 1/2" (12 mm)

All are available in black solid core and 12ft lengths.



5/16" – 3/8" side view  
(8mm – 10 mm)



1/2" side view  
(12 mm)

Attach reducer strip to mats with compatible, non-solvent based adhesive or caulking, e.g. Bull Dog Adhesive PL400.

#### C) Adhesive

**IMPORTANT:** If adhesive other than the products noted below is used, these installation guidelines may not apply. Contact adhesive manufacturer for specific guidelines for Recycled Rubber Flooring.

#### Mats Inc. recommended adhesive:

##### 1) Chemrex Urethane 941 (V.O.C. compliant)

- One component polyurethane adhesive
- 2 gallon pail: 26 lbs (12 kg)
- Approximate coverage: 150 sq.ft. (14 m<sup>2</sup>) per pail

##### 2) Chemrex Urethane 941 (V.O.C. compliant)

- One component polyurethane adhesive
- 5 gallon pail: 57 lbs (26 kg)
- Approximate coverage: 375 sq.ft. (35 m<sup>2</sup>) per pail

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

- One component polyurethane adhesive
- 313 ml gun grade: 2 lbs (10 oz tube)
- Approximate coverage:
  - 1/8" (3mm) bead = 90 lineal feet
  - 5/16" (8mm) bead = 11 lineal feet



It is not uncommon for a moisture cured urethane product, such as Chemrex CX941, to develop a slight skin on the top surface of the product. The slight skinning can be the result of product getting older, or in the case of newer product, perhaps a poor seal in the lid. Regardless, the product is still good; simply trim the skin and discard. In the case of older product, a thicker skin may have developed, and the viscosity of the overall product may have thickened, also making the application a bit more difficult, but in most cases will still perform.

BASF Technical Support

For detailed information and product use, refer to BASF Product Data Guide, included with adhesive.

## **D) Sealer**

For most installations, it is not necessary to seal or coat Mats Inc. tiles. However, in certain installations, sealer may be appropriate. Please contact your sales representative for suitability. When applicable, Mats Inc. recommends Diversey Carefree Matte sealer.

## **SECTION III**

### **BEFORE STARTING THE INSTALLATION**

The sub-surface must be smooth, clean, and dry.

**A)** During storage, rubber tiles must be kept dry and adhesive must be stored above 50°F (10°C) in a dry, heated space.

**B)** Check the ambient temperature:

- Temperature range for adhesive use: between 50°F (10°C) and 104°F (40°C).
- In-floor radiant heat should be shut off.
- In all situations, working at the extreme ends of the temperature range will affect curing times, viscosity and pot life of adhesive, possibly resulting in adhesion problems.

**For detailed information and product use, refer to BASF Product Data Guide, included with adhesive.**

## **SECTION IV**

### **PREPARATION OF THE SUB-SURFACE**

The sub-surface must be level, clean, and dry. Remove all old adhesive. A rough or uneven sub-surface will result in an uneven installation.

#### **A) Concrete sub-surfaces**

New concrete sub-floors must be thoroughly cured and free from hydrostatic pressure before rubber tiles are installed (a minimum of 28 days after pour). Consult adhesive specifications for allowable moisture tolerance.

Subfloor must be smooth and level to a tolerance not exceeding 1/8" in 10 lineal feet. If existing sub-floor is rough or does not meet the above criteria, apply a Portland based leveling compound to smooth & level the surface. Follow all leveling compound manufacturers' instructions.

***It is vital that a moisture test be completed prior to floor installation, and that sub floors are cured and dry to acceptable levels.***

Moisture is the single most significant factor that causes bonding failure to the sub floor.

#### **B) Wooden sub-surfaces**

- New plywood should be acclimatized for a 48-hour period prior to installation of the rubber flooring.
- CDX exterior smooth one side suggested for new wood substrates.
- Secure all nails to prevent future protrusion.
- Any cracks, holes, and rough or uneven areas should be patched with good quality cement based leveling compound.

## **SECTION V**

### **INSTALLATION OF SQUARE CUT TILES**

**Important: See Section I, (D) and (E) regarding acclimation of tiles.**

Visually inspect all mats for visible defects. Ensure that defective product is identified prior to the start of the installation, set these aside and notify dealer immediately with information of any defects found.

Glue down installation is required for all square edge tiles. This installation method and tile format is a must for areas of extreme temperature and humidity change, or where surface moisture may be present after installation, i.e. ice arenas, locker rooms and entry ways.

#### **1. ARRANGING THE TILES**

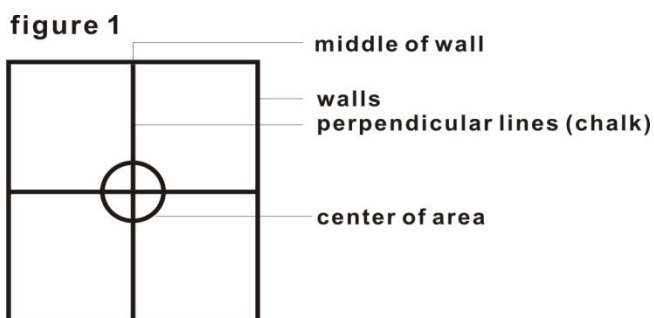
The installer should have all relevant information about the tile arrangement from the owner.

**Note: If installing a logo, see Section VII now.**

Each tile is marked with a label stating: **THIS SIDE DOWN**, DO NOT remove these labels until final glue down commences. Make sure that all tiles are laid down with the "label" pointing in the same direction.

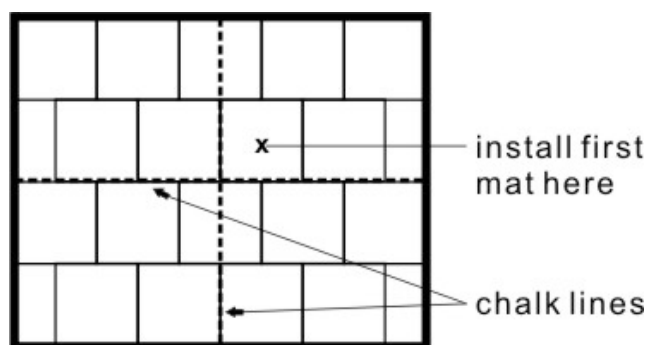
Occasionally uneven distribution of color granules may appear in a tile. This can be rectified by rotating the tile  $\frac{1}{4}$  turn or installing it in a less visible area. Install tiles same side up as received, **DO NOT FLIP OVER**.

Locate the mid point of the room, and chalk a start line down the centre. Chalk another similar start line 90 degrees and square to the first one. Begin mat installation from the point where the two chalk lines intersect. Work outwards in both directions. (see figure 1).



Start second row on either side of the center line towards the chalk line. Make sure that second row is installed by staggering the tiles. This will avoid any four corners from meeting at one spot (see figure 2).

figure 2



## 2. MEASURING & CUTTING

Lay tile 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 water cut edges together. Hand cut edges should be used against walls wherever possible.

Make sure that you measure carefully so that the tile will fit properly and does not leave gaps, resulting in the installation being out of alignment.

## 3. ADHESIVE

**IMPORTANT:** If adhesive other than Mats Inc. recommended adhesive is used, these installation guidelines may not apply. Contact adhesive manufacturer for specific guidelines for Recycled Rubber Flooring.

### A) General

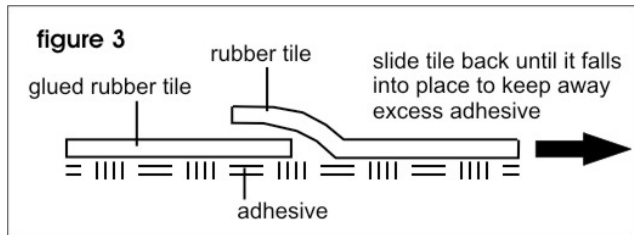
- Please read label on adhesive packaging thoroughly before starting with the installation.
- Moisture is the single greatest cause of bonding failure. Ensure levels are at or below those accepted by adhesive manufacturer.
- Higher temperatures and humidity cause the adhesive to cure faster.
- Use safety glasses, rubber boots, and rubber gloves when applying adhesive.
- Room must be well ventilated.
- For first aid and safety instructions see labels on can, technical data sheets, and MSDS.

### B) Applying Adhesive

**DO NOT GET ADHESIVE ON THE TOP SURFACE OF THE RUBBER FLOORING AS IT IS VIRTUALLY IMPOSSIBLE TO REMOVE. CONTACT YOUR MATS INC. SUPPLIER IMMEDIATELY FOR SUGGESTED CLEANING METHODS IF THIS HAPPENS.**

All substrates must be structurally sound, smooth, clean, dry, and free from dust, loose material, grease, oil, wax, sealers, curing agents, and other foreign materials. Apply adhesive with  $\frac{1}{16}$ " (1.6 mm) V-notch trowel. (Available from Mats Inc.) Using a larger trowel will result in excess adhesive coming up between seams. **Wear gloves at all times when applying adhesive. Do not allow adhesive to cure on your hands.**

Put the tile that you are installing on top of the tile already glued down and pull towards the area you want to fill until the tile falls into place, then firmly press tile up to edge of existing tile. This will keep excess adhesive from protruding between the seams (**see figure 3**).



**DO NOT use tape of any kind during glue down installation. Tape residue cannot be removed from the top surface.**

When applying adhesive, glue must be spread evenly on the sub-surface to avoid differences in tile height. Allow 48 hours setting time. Avoid heavy traffic during curing. See section C – Rolling

### C) Rolling

Roll each row as completed. Roll the entire floor when project is completed. Work in both directions. Note that adhesive is slippery when first spread and tiles will shift position even if only disturbed slightly.

No foot traffic of any kind should be allowed for the next 12 hours (24 hours for ice skate blades and cleats), allow 72 hours for maximum strength.

A 50 to 70 pound roller should be used to ensure the underside tile surface is fully bonded to the glue and sub-floor. Too much rolling or too heavy a roller could cause the tiles to buckle and adhesive to move upwards through the seams. Furthermore, stretching of the rubber flooring can eventually lead to gaps between the tiles.

### Guideline:

5/32" (4mm) thick floor - use a 50 lb. roller  
1/4" (6mm) thick floor - use a 50 lb. roller  
1/2" (12mm) thick floor - use a 70 lb. roller

### D) Clean Up Adhesive

Do not allow excess adhesive to come in contact with top surface of rubber flooring as it is virtually impossible to remove. Contact your Mats Inc. supplier immediately for suggested cleaning methods if this happens. Using mineral spirits or similar products to remove adhesive will alter the surface appearance of the tiles. Any damage to the tiles as a result of adhesive removal is solely the responsibility of the installer.

Follow adhesive manufacturers instructions for clean up of tools.

## 4. SEALER

Please note that sealer is not required for all applications. However products with a predominance of light colored EPDM will be easier to maintain if sealer is applied. Please contact your sales representative for suitability.

### Recommended Products:

- Diversey Carefree Matte (sealant)
- Diversey Profi, Diversey Combiplus or Diversey Wiwax cleaners
- Diversey Pro Strip (amine floor stripper)

### A) Post construction

- Sweep the floor. Dry vacuum to ensure any dirt is removed.
- Wet scrub floor with Diversey Profi cleaner (6 - 8 oz/gal of water) using buffer or auto scrubber with Diversey contact pad (purple) or soft nylon brush.
- Wet vacuum soiled solution, rinse, and allow to dry thoroughly (6 – 8 hours).

### B) Initial application of sealer

- Apply 3 thin coats of Carefree Matte.
- Allow to dry between each coat.
- Note: Apply floor finish with synthetic wax mop. While the finish is wet, buff the floor with floor buffer (150 – 300 rpm) and soft nylon brush. This application drives the finish into the floor and causes proper sealing and coating of the floor.



## **SECTION VI**

### **CLEANING & MAINTENANCE**

**IMPORTANT:** IF WATER SOLUBLE OR RELEASIBLE ADHESIVE HAS BEEN USED TO INSTALL YOUR FLOOR, THESE MAINTENANCE GUIDELINES MAY NOT APPLY. CONTACT ADHESIVE MANUFACTURER FOR SPECIFIC GUIDELINES FOR RECYCLED RUBBER FLOORING

#### **A) INITIAL CLEANING AFTER INSTALLATION**

When installation is complete and adhesive is fully cured (at least 72 hours), sweep floor to remove any debris, then dry vacuum thoroughly to remove all dust and dirt. Damp mop the entire floor using a sponge mop and very little water. A solution of warm water with a small amount of mild lemon or orange cleaner added is recommended. Change water frequently.

#### **B) GENERAL MAINTENANCE**

Typically, Mats Inc. Rubber Flooring requires less maintenance than other types of flooring. Vacuuming then damp mopping is the preferred method; very little or no detergent is necessary. Change water frequently. Use a mild detergent. Products containing solvents and acids will attack the composite structure of the rubber flooring and cause deterioration. Sealants, waxes, etc. can alter the surface characteristics and appearance. Mats Inc. does not assume any responsibility for damages caused by chemical additives.

### **1. NON-SEALED FLOORS**

#### **Daily/Weekly Cleaning:**

- Dry vacuum floor thoroughly.
- Damp mop with mild detergent.
- When cleaning equipment/furnishings with disinfectant, or other strong cleaners, be careful that overspray or excess cleaner does not drip onto the rubber flooring. Strong chemicals may cause the surface to deteriorate.

#### **Periodic Cleaning:**

The ideal machine to use is one that combines vacuuming, washing, rinsing, and drying, e.g. Rotowash by Whittaker, or Taski Combiplus.

If a one step machine is used, these steps should be taken:

- Mix mild detergent with water.

- Use string mop to dampen floor. Let solution act for approximately 10 minutes.
- Use scrubber machine with soft brush.
- Use clear water to rinse; change rinse water frequently.
- Remove excess water for quicker drying.

### **2. SEALED FLOORS**

- Dry vacuum floor thoroughly; or
- Auto scrub or wet mop floor using Taski Combiplus or Diversey Wiwax.

#### **Periodic cleaning:**

- Dry vacuum floor thoroughly.
- Wet scrub floor with Diversey Profi (4 oz/gal). This application is done with an auto scrubber or buffer and wet vacuums. Use Diversey purple pad for scrubbing the floor. Allow solution to remain on the floor for 5 minutes.
- Wet vacuum soiled solution. Rinse and allow to dry (1-2 hours).
- Apply 1-2 thin coats of Diversey Carefree Matte using wet buffing with soft nylon brush.
- In certain environments, the floor may become scuffed due to heavy foot traffic and may require more frequent spray or dry buffing with a mint or white pad.
- When spray buffing use Diversey Wiwax diluted 50/50 with water.

#### **Tips about sealers**

- Use high suction CFM vacuum to pick up dust.
- Wait for floor to dry between applications of floor finish or sealer.
- Apply thin coats of floor finish with wax mop and follow with floor buffer using a soft nylon brush.
- For large areas, use an auto scrubber with a soft nylon brush to clean the floor daily.
- For stripping a rubber floor, use Diversey Pro Strip and nylon brush.
- For poorly maintained floors, it may be necessary to continue cleaning with Pro Strip for an extended period.
- For food areas, cleaning should be done with Profi (2 – 4 oz/gal water).
- To remove gum, use a generic gum remover.

For high traffic areas, floors may be top scrubbed and recoated as needed.



## **SECTION VII**

### **LOGO INFORMATION**

All logos are assembled at the factory prior to being shipped to insure a precise fit has been achieved. Use care when handling logo pieces to protect from damage or loss.

- Custom logos are packaged depending on logo size.
  - a) One mat logos are usually packaged in a separate box
  - b) Larger logos are packaged on top of the pallet
  - c) Smaller pieces are always packaged separately in either a plastic bag or small box
- Use care when opening the packaging of small logo pieces as they may fall out.
- Refer to Section I, Material Storage & Handling.

### **LOGO INSTALLATION**

1. Confirm required logo location from site drawings or by confirming with building owner.
2. Dry lay logo complete with background mat in desired location. Confirm edges of background mat are squared to ensure a tight fit of all pieces.
3. Mark location on all sides to ensure correct placement during glue down.
4. Carefully remove logo and place to the side (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).
5. Spread adhesive in area of logo placement following installation instructions. Be extremely careful not to use too much adhesive, as it could seep through small pieces onto surface of the logo tile.
6. Carefully place background mat and logo pieces into place, starting with larger pieces.
7. Gently adjust pieces if necessary to ensure a good fit.
8. Extreme care should be taken when rolling logo tiles. Roll carefully and use a roller weight that is suitable for tile thickness. **4mm and 6mm tiles should be rolled with caution.**
9. Continue to install surrounding floor, being careful to protect logo from all traffic. Cover with clean drop cloth if possible until installation is complete.

**These steps are given as a guideline only. Installations with multiple logos may require alternate methods. Please consult your Mats Inc. representative if additional information is required.**



**One Mat Logo**



**Two Mat Logo**

## SECTION VIII

### WEIGHTS & MEASURES

#### GENERAL PACKAGING INFORMATION

All MATS INC. products are packaged on wooden pallets, covered with a plastic hood, and secured by steel strapping.

#### Product Information - Rubber Flooring Tiles:

**Thickness tolerance of  $\pm 0.5$  mm**

**Dimensions:** 38" x 38" = 10.02 ft<sup>2</sup> (96.5 cm x 96.5 cm = 0.93 m<sup>2</sup>)

Thickness	0-29% Color		30-50% Color		51-70% Color		71-100% Color	
	lbs (kg) each	# per pallet	lbs (kg) each	# per pallet	lbs (kg) each	# per pallet	lbs (kg) each	# per pallet
5/32" (4mm)	10 (4.5)	200	10.5 (4.8)	200	11 (5)	200	12 (5.4)	200
1/4" (6mm)	16 (7.3)	150	16.5 (7.5)	150	17 (7.7)	140	18 (8.2)	130
5/16" (8mm)	20 (9)	120	21 (9.5)	110	22 (10)	110	24 (10.9)	100
3/8" (10mm)	23 (10.5)	100	25 (11.3)	100	27 (12)	90	30 (13.6)	80
1/2" (12mm)	27 (12)	80	29 (13.2)	80	32 (14.5)	75	36 (16.3)	65

**Pallet** (net weight) **65 lbs (29.5 kg)**

#### Conversion Chart:

1 in	=	2.54 cm
1ft	=	30.5 cm
39.4 in	=	1.00 m
2.2 lbs	=	1.0 kg

Weights and measures may change without notice. All measurements are nominal and subject to variation.



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