

## ***ECO-RUBBER PAVERS - OUTDOOR RUBBER SURFACING*** **INSTALLATION / MAINTENANCE GUIDELINES**

- **3/4" INTERLOCKING PAVER**
- **3/4" NON-INTERLOCKING PAVER**

The following pages are guidelines only... please read this manual before installing **Eco-Rubber Surfacing** products.



**Interlocking Paver**



**Non-Interlocking Paver**

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## **Section I**

### **MATERIAL STORAGE & HANDLING**

#### **On receipt of merchandise:**

- A. Inspect your shipment for damage.
- B. If adhesives are exposed to freezing temperatures, place indoors and bring to room temperature before using. Read technical data sheets and material safety data sheets for adhesive.
- C. The products in front of you have gone through quality checks to ensure correct product, number of pieces, and that the physical properties, dimensions and visual appearance have passed our standards. However, for your own protection, we ask you to inspect this shipment for any apparent shortcomings before starting the installation by laying out ALL of the pavers for thorough visual inspection and complete acclimation (see also point D below). **Please note we are not responsible for any installation costs if defective product was not identified prior to installation.**
- D. Store in a dry and clean area. Rubber expands and contracts according to temperature and humidity changes. A paver laid in the morning hours at 32°F (0°C) would be a different size than a paver laid at 68°F (20°C) later in the day. Therefore, before starting the installation lay out ALL the pavers you will be installing on the next day, on the sub-surface.
- E. Allow products to adjust to ambient temperature for a minimum of 24 hours. Acclimation is complete when the products have reached their specified dimensions. Refer to the Section IX for weights and measures.
- F. During prolonged storage of Rubber Flooring the pavers in the lower portion of the stack will be compressed to a greater degree than those in the upper portion of the stack. This will show as a thickness variation on product from the top of the pallet compared to the bottom. Product dimension (length and width) may also be affected. Under normal circumstances, the product should be taken off the pallet and distributed throughout the installation area in small piles to allow for acclimation (minimum of 24 hours). However, if the product has been stored for an extended period of time, a longer acclimation time will be required. Exactly how long is very difficult to predict. Check length, width, and thickness periodically until the right dimensions have been reached. (see weights & measures chart). Do not install the pavers if they are not square and the appropriate thickness has not been reached.
- G. It is important to keep a clean working surface at all times. Protect rubber surfacing from dry wall dust.
- H. Keep ECO-RUBBER rubber surfacing dry. Wet pavers will cause adhesion problems.
- I. Petroleum distillants (e.g. solvents) as well as animal fats (e.g.: barbeque drippings) will damage the rubber flooring. See test results for other harmful chemicals and compounds.

## Section II

### TOOLS & ACCESSORIES

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

- Safety glasses
- Heavy duty utility knife
- Rubber mallet & 2x4 wood block x 12" L
- Measuring tape
- Transit level
- Straight edge
- Caulking gun
- Chalk snap-line
- Drill and mixer for adhesive
- V-notched trowel 1/8" (3.2 mm)
- Carpenter's square
- Paint marker
- Mineral spirits
- Perimeter border if required (e.g. 2x4 lumber)

#### A) Finishing kits

The Finishing Kit consists of 4 kg rubber granules and 800 g polyurethane binder. It is convenient to have on site at the end of the project to make installations look professional and clean.



#### B) Adhesive

ECO-RUBBER recommended adhesive:

##### 1) Chemrex Urethane 948 (v.o.c. compliant)

- One component polyurethane adhesive
- 313 ml gun grade: 2 lbs (10 oz tube)
- approximate coverage: 3/8" bead equates to 300 lineal feet

##### 2) Chemrex Urethane 941 (v.o.c. compliant)

- One component polyurethane adhesive
- 2 gallon pail: 26 lbs (12 kg)
- approximate coverage: 150 sq. ft. per pail using a 1/16" (1.6 mm) trowel

##### 3) Chemrex Urethane 941 (v.o.c. compliant)

- One component polyurethane adhesive
- 5 gallon pail: 55 lbs (25 kg)

- approximate coverage: 375 sq. ft. (35 m<sup>2</sup>) per pail using a 1/16" (1.6 mm) trowel



#### C) Interlocking pins

The interlocking pins are made from black polyethylene. Each interlocking paver or paver requires four (4) interlocking pins. They are included with every order, four per paver.



Interlocking Pin

#### D) Reducer Strip

##### Size:

- 3/4" (19 mm)
- available in black solid core x 12ft lengths.



Attach reducer strip to pavers with compatible, non-solvent based adhesive or caulking.

## **Section III**

### **BEFORE STARTING THE INSTALLATION**

**A)** The sub-surface must be level, clean, and dry. It is recommended that all concrete slabs be tested for hydrostatic pressure. Simply test by placing a piece of plastic sheet 2x3 ft<sup>2</sup> (60x90cm<sup>2</sup>) over concrete and tape edges. Moisture or dark areas noticeable under the piece of plastic after 24 hours indicate that the area is not considered to be dry.

**B)** For rooftop applications, check with an accredited structural engineer to ensure your roof load requirements for this project. (see weights & measures chart). Ensure good drainage of the area by a well-defined gradient of the surface and well-placed drainage pipes in lower spots. Thoroughly remove all dirt and debris from the surface. A clean smooth surface will help in achieving optimum installation results.

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

**D)** Check the room temperature:

- Temperature range for adhesive use: above 50°F (10°C) and below 104°F (40°C).
- In-floor radiant heat should be shut OFF. Higher temperatures and humidity increase the curing rate and reduce the working time (pot-life) of adhesive resulting in adhesion problems. Follow instructions on label of can!

## **Section IV**

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

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

New concrete sub-floors must be thoroughly cured and free from hydrostatic pressure before ECO-RUBBER Rubber Surfacing is installed (a minimum of 28 days after pour).

Consult adhesive specifications for allowable moisture tolerance.

If existing concrete is too rough, you can smooth it by sanding or applying a cement based leveling compound (patch), allowing a curing time as recommended by the patch manufacturer. Follow manufacturer's installation guidelines. Surface must be clean and dry before starting the installation.

#### **B) Asphalt sub-surfaces**

This type of surface must be hard, level and free of grease, oil and other contaminants. Surface should be pressure washed to remove all loose materials and be thoroughly dry before commencing the installation. Asphalt must be cured for a minimum of 14 days.

#### **C) Wooden sub-surfaces**

Rubber paver installations over a wooden sub-surface are not recommended unless an appropriate waterproofing system has been applied (i.e. peel and stick, torch-down membrane, etc.). Trapped moisture on an unsealed substrate may cause deterioration and premature rotting of the wood.

#### **D) Compacted granular surface**

Compacted granular surfaces are defined as grass, dirt, sand, or gravel base. All ECO-RUBBER rubber pavers must lie on a firm, compacted, pervious surface. Excavate the area to the depth of the thickness plus a minimum of 4". Level and compact the area with a medium to coarse crushed gravel (3/4" minus). Moisten and compact with a flat plate vibratory compactor to 95% proctor. A small amount of concrete may have to be added to the sand. Depending on the irregularity of the resulting surface, use up to 1/4" graded medium sand to make a smoother surface. Moisten and compact again.

Install filter cloth (geotextile) over top of compacted level sub-surface. The rubber pavers will move if there is more than a 1/4" layer of sand.

Even after proper compacting, over time this type of installation is susceptible to ground settling.

**Any heaving or settling of soft ground sub-surface as a result of thawing is the sole responsibility of the installer and/or owner.**

### E) Roofing Membrane

Eco-Rubber pavers are compatible with most roofing membranes and do not require the installation of a protective cover in most cases.

The pavers are loose-laid and interlocked over the membrane which offers optimum membrane protection without limiting accessibility to the membrane. The interlocking pavers can be easily removed to access the roof surface for maintenance and repair.

## Section V

### INSTALLATION OF RUBBER PAVERS

#### LAYOUT

Make sure the sub-surface is properly prepared. Determine area of layout. Mark all vent, post and/or structure mount areas before starting the installation.

Start in one corner. As reference for installation, measure the designated roof area and snap chalk lines both length & width at the center of the installation area.

#### INSTALLATION

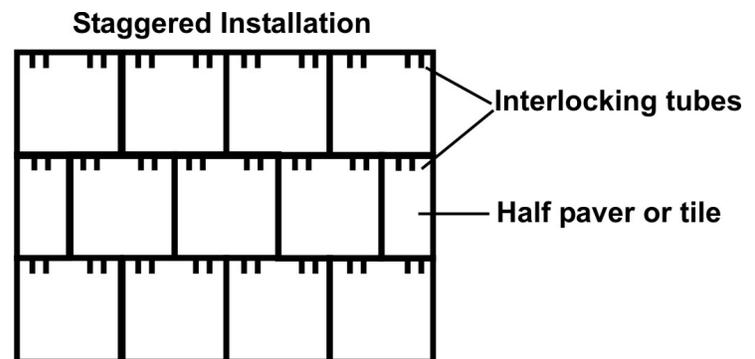
Place the first paver at a 90° right angle in your designated starting corner point. Some installations may be started against a wall or existing border. Experience will dictate which is best. Make necessary adjustments accordingly. Align first row of pavers along straight edge. Make sure that all interlocking holes are facing toward unfinished area.

Start second row with a half paver and install in a staggered method. Insert the interlocking pins into the paver prior to laying.

**For best results, a perimeter edge border is required. This will reduce movement of the pavers while inserting the interlocking pins. The unique interlocking system allows the pavers to be securely fastened to one another without having to glue the material to the sub-surface.**

Repeat first and second row until installation is completed. After pavers are laid, install the last two remaining perimeter borders, making sure they are as tight as possible against the pavers. A rubber mallet is helpful in this process.

**When installing interlocking pavers, ensure that the interlocking holes run in the same direction.**



#### MEASURING & CUTTING

Lay paver on a piece of plywood, hold the metal straight edge on the cut line, and cut with sharp heavy duty utility knife. Let the paver droop or hang over the edge of the wood base and keep scoring the cut until separated. For odd angles, circular patterns, etc. a cardboard template is suggested. Change or snap off blades frequently to assure clean cuts.

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

### **Interlocking system:**

When using a template to draw the cut marks on the paver, be sure the interlocking holes are facing in the right direction. If your cut is out by 1/16", it will affect the whole installation and magnify as you progress, causing the pavers to be out of alignment.

### **Installing on Filter Cloth over Compacted Granular Base**

We recommend "Amoco 2000 by Nilex" filter cloth (geotextile) or equal. Insure the ground sub-surface is level and compacted. Install filter cloth over top of compacted level sub-surface. Provide a minimum of 12" overlap at all joints. Secure overlap with duct tape or an adhesive.

Secure filter cloth by either of the following methods:

- a) Create a perimeter from treated wood, i.e. 4" x 6", then fasten filter cloth to treated wood with staples. Use galvanized nails to hold treated wood border together. To prevent staples from rusting, glue nailing strip over staples.
- b) Dig a trench around perimeter; set filter cloth into the trench, cover with ground material and compact. Pavers should be glued to filter cloth by dabbing glue to the cones and borders visible on the back of the pavers.

### **ADHESIVE**

#### **a) General**

- Please read label on adhesive packaging thoroughly before starting with the installation.
- Moisture is the single greatest cause of bonding failure!

- 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**

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 1/8" (3.2 mm) V-notch trowel. ECO-RUBBER will sell upon request.

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

Do not allow adhesive to cure on your hands or the flooring. Immediately wipe off excess adhesive using a damp cloth with mineral spirits (use sparingly). Cured adhesive is very difficult to remove. **We strongly suggest wearing gloves when applying adhesive.**

Do not use tape of any kind to help secure seams during glue down installation. Tape residue cannot be removed from the top surface.

When applying adhesive, glue must be spread evenly under each paver to avoid differences in paver height. Allow 48 hours setting time. Avoid heavy traffic.

#### **c) Clean Up Adhesive**

Excess adhesive should be cleaned immediately with hot water or mineral spirits, as cured adhesive bonds tightly and is difficult to remove. Do not use solvents as

they cause deterioration of the bonding between the rubber granules.

Do not allow adhesive to cure on your hands or the flooring. Immediately wipe off excess adhesive using a damp cloth with mineral spirits (use sparingly). Cured adhesive is very difficult to remove. **We strongly suggest wearing gloves when applying adhesive.**

## **Section VI**

### **FINISHING KITS - FILLING IN CUTS**

After all pavers are in place and secured, holes that were cut to fit the vents, post holes, or structure mounts can be filled. A black, single component, polyurethane caulking can be used for small repairs (e.g. for ¼" voids).

For voids exceeding ½" in diameter around, the **ECO-RUBBER Finishing Kit** should be used.

#### **Contents of Finishing Kit:**

- 1 - can (= 800 grams) polyurethane binder 107 (800 grams)+ Material Safety Data Sheet
- 1 - bag (=4 kg) rubber granules (please specify color to match order)
- 1 - MSDS for polyurethane binder

#### **A) Mixing**

Take full amount of rubber granules and pour into clean plastic pail, gradually pour binder into mixture, stir while pouring.

**If only part of the kit is needed, use this guide:**  
5 parts by weight of granules to 1 part by weight of binder, e.g. 5 ounces granules to 1 ounce binder.

The curing time for this product is approximately 20 to 40 minutes depending on ambient temperature and humidity. Mix only what will be used in this time frame. Higher ambient temperatures and humidity will result in a faster curing rate! Do not start

installation if weather forecast calls for rain or temperatures below 60° F (= 15° C)

**Do not mix the ingredients until installation of pavers is completed. Read MSDS before starting.**

#### **B) Clean up**

Use a solvent to clean tools. Use hot water or mineral spirits to clean rubber pavers and pavers, as solvents can cause deterioration of the pavers. Clean up any polyurethane immediately as it may leave visible traces.

## **Section VII**

### **GENERAL CLEANING & MAINTENANCE**

#### **ROUTINE MAINTENANCE EXTENDS LIFE AND ENHANCES APPEARANCE.**

The pavers are coated with water based mold release residue, causing slight discoloration and slipperiness. For faster removal, simply apply a solution of neutral cleaner (i.e.: simple green) and agitate with brush or mop, then rinse with water. Otherwise, let mold release wear off with time, which could take up to four weeks.

#### **1. Sweeping**

Sweeping the surface with a push-broom will be the most common method of keeping the pavers clean. However, because of the porosity and granular texture of the surface, it is difficult to remove all contaminants by sweeping alone.

#### **2. Vacuum**

Using a vacuum will produce similar results as when used on carpet.

#### **3. Water Hose**

Use a water hose with a spray tip to remove contaminants from porous top surface. If using this method, please ensure proper drainage.

ECO-RUBBER does not assume any responsibility for damages caused by

chemical additives.

## **Section VIII**

### **WEIGHTS & MEASURES**

#### **GENERAL PACKAGING INFORMATION**

All ECO-RUBBER products are packaged on wooden pallets, covered with a plastic hood, and secured by steel strapping.

#### **A) Non-Interlocking *Eco-Rubber* Pavers:**

**Dimensions:** 23 3/4" x 23 3/4" (60.3 cm x 60.3 cm) 3.92 square feet

<b><u>Thickness:</u></b> 3/4" (19 mm)	<b><u>Pavers per pallet:</u></b> 172	<b><u>Weight per paver:</u></b> 14 lbs (6 kg)
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#### **B) Interlocking *Eco-Rubber* Pavers:**

**Dimensions:** 24" x 24" (61 cm x 61 cm) 4 square feet

<b><u>Thickness:</u></b> 3/4" (19 mm)	<b><u>Pavers per pallet:</u></b> 160	<b><u>Weight per paver:</u></b> 15 lbs (6 kg)
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<b><u>Conversion Chart:</u></b> 1"	=	2.54 cm
1'	=	30.48 cm
39.4"	=	1 m
2.2046	lbs =	1 kg

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

**Section IX****DISCLAIMER**

The installation guidelines in this manual represent typical installation work procedures. Every site is different and ECO-RUBBER does not claim to have covered all possible circumstances. ECO-RUBBER Manufacturing LTD. does not warrant installation work not directly performed by ECO-RUBBER, and specifically disclaims liability for any direct or indirect personal injury, property damage or other costs or losses resulting from installations or applications by third parties. Please see the ECO-RUBBER Limited Warranty for the particulars of warranty coverage relating to ECO-RUBBER products.

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