

Upon Delivery of Product

1. Verify packing slip with product and order.
2. Inspect delivered product thoroughly. Report any discrepancies of original order, product defects, etc. No reimbursement/warranty claim will be given for labor on material installed with visual defects. Any defects— size, color, or otherwise— must be reported to Rubber-Cal, Inc. prior to installation.
3. Store products and adhesives in a clean, dry environment with temperatures between 70° F and 95° F.
4. Read product and sub-floor preparation instructions, warranty and other disclaimers carefully and completely before beginning any installation.

WARNING: DO NOT use recycled rubber products in conjunction with any petroleum-based products. This includes solvents, adhesives or sealants. All substrates (especially new concrete) must be fully cured and properly installed and alkaline vapor emissions tested and found to be at appropriate levels prior to installing rubber products.

Recommended Tools

1. Measuring tape or ruler and metal straight edge
2. Non-retractable utility knife with extra blades
3. White marker, chalk, or chalkline
4. 2" x 4" wood block
5. Cellophane, masking, or packaging tape
6. Rubber mallet
7. Compass
8. "V" notched trowel 1/8" X 1/8" outdoor installations or "V" notched trowel 1/16" X 1/16" indoors installations
9. Mineral spirits and rag
10. Rubber Gloves
11. Commercial grade caulking gun
12. Carpenter's square
13. Paint Roller Frames, Extensions, Trays and Fluffy Rollers
14. Spray Water Bottle (mist)

Adhesive Options

Chemrex® CX-941 Trowel Grade Polyurethane Adhesive

Description: Chemrex® CX-941 is a one component, polyurethane-based trowel-grade, waterproof structural adhesive with vapor reducing characteristics. Its elastomeric properties enable it to move as it expands and contracts. The patented formula is VOC compliant and contains no solvents or water. Chemrex® CX-941 provides excellent initial green strength and outstanding bond strength. It is formulated for indoor and outdoor applications.

<i>Polymer Type:</i>	Polyurethane
<i>Yield:</i>	60 square feet per gallon
<i>Packaging:</i>	2 gallon (7.6 L) pails, 5 gallon (18.95 L) pails
<i>Color:</i>	Light Brown
<i>Viscosity:</i>	Creamy Trowelable
<i>Working Time:</i>	45 - 60 Minutes
<i>Freeze-thaw stability:</i>	Unlimited cycles
<i>Service Temperature:</i>	- 40° F to +150° F or - 40° C to +66° C
<i>Slab Temperature:</i>	+50° F to +100° F or +10° C to +38° C
<i>Shelf Life:</i>	1 year when properly stored
<i>Storage:</i>	Store at 75° F (24° C) and 50% relative humidity. Protect unopened containers from heat and direct sunshine. In cool weather, store containers at room temperature for at least 24 hours before using.
<i>Compliance:</i>	ASTM E84-95B: NFPN, class A and UBC, Class1. USDA compliant for use in meat and poultry areas.

For Best Performance

- Wear gloves during application; Chemrex® CX-941 is difficult to remove from skin and clothing. If adhesive gets on skin, immediately wipe it off with a dry cloth.
- Do not apply on frozen surfaces or standing water.
- Avoid contact with water or alcohol before use and before complete cure.
- Do not use in areas subject to hydrostatic head pressure.
- Do not use on wet, contaminated, or friable substrates.
- The maximum acceptable floor variation is 3/16" (4.76 mm) in 10 feet (3 m) or 1/8" (3.75 mm) in 6 feet (1.8 m).
- Do not use as a leveling agent.
- Do not set flooring into an adhesive that has a dry skin.
- Proper application is the responsibility of the user.



Health and Safety

Caution

Chemrex® CX-941 contains methylene bisphenyl diisocyanate; Talc; Hydrotreated light petroleum distillate; Polymethylene polyphenol isocyanate; Silica and crystalline quartz.

Risks

May cause skin and eye irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Inhalation of vapors may cause irritation and intoxication with headaches, dizziness and nausea. Ingestion may cause irritation. Reports have associated repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. Contains crystalline silica. NTP and IARC recognize respirable crystalline silica as a human carcinogen. The exposure to crystalline silica during the normal use of this product will be little or none. **INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.**

Precautions

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or if used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. **DO NOT take internally.** Keep container closed. Empty container may contain hazardous residues. All label warnings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. **SEEK IMMEDIATE MEDICAL ATTENTION.** In case of skin contact, wash affected areas with soap and water. If irritation persists, **SEEK MEDICAL ATTENTION.** Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swallowed, **SEEK IMMEDIATE MEDICAL ATTENTION.** Refer to the Chemrex® CX-941 Material Safety Data Sheet (MSDS) for further information.

VOC Content

45 g/L or 0.38 lbs./gallon less water and exempt solvents.

Plastic Pins (for temporary installations)

The 3" Eco-Play Safety tiles contain 2 holes on each of the 4 edges of the tiles. These holes can be inserted with a plastic pin with ferruled edges used to interlock the tiles. Generally you need 5 pins per tile to install this product. The pins can also be used to connect transition pieces.

Transition Pieces

Transition pieces in the form of ramps are available for this product to create a gradual incline from near ground level to the 3" height of the tile. These ramps are 19.5" long by 7.87" wide and descend from a 3" height down to 3/8". The ramps can either be adhered down or connected using the connector pins mentioned above.

Preparation

Rubber products must reach ambient room temperature to ensure a secure, tight installation with minimal size fluctuation. Each piece should be allowed to relax and set for a full 24 hours prior to installing. This allows the product to relax to size and stabilize at typical room temperature. Inspect the product prior to installation for measurable defects or variations.

Subsurface Preparation:

For best installation, any subsurface should be reasonably flat and free of holes or variances of more than 1/8".

1. Ensure that floors are structurally sound and fully cured a minimum of 28 days. **TEST FLOOR FOR VAPOR DRIVE IN ACCORDANCE WITH ANHYDROUS CALCIUM CHLORIDE TEST. VAPOR DRIVE SHOULD NOT EXCEED THE INDUSTRY STANDARD OF LESS THAN 3.0 LBS. PER 1,000 FT.² IN 24 HOURS.**
2. When test results are greater than 3.0 lbs. but less than 12 lbs. per 1,000 ft.² in 24 hours, refer to the product data sheet for Chemrex® Concrete Floor Primer (Form No. 1019775).
3. Repair concrete and install joint sealants and fillers as necessary. Use patching materials as appropriate.
4. Low spots must be filled with a self-leveling underlayment or level prep.
5. Mechanical surface profiling is the preferred floor preparation method. It is the only acceptable preparation method where warranties are issued. Acid etching is not recommended. Shot blast the floor to medium-grit sandpaper texture to remove curing and parting compounds and other surface hardeners and floor coatings.
6. Clean floors of oil, grease, and other bond inhibiting materials not removed by shot blasting or other mechanical means with



a commercial degreaser.

Eco-Play Safety tiles may be applied to concrete, wood, and asphalt (for temporary installations, compacted dirt is acceptable). All subsurfaces should be properly excavated and applied to ensure subsurface drainage, non-separation of concrete layers, and prevention of heaving due to freeze/thaw or unstable ground conditions. The stabilization of the subsurface is the sole responsibility of the installer and/or owner.

A - Concrete:

New concrete must be allowed to cure thoroughly prior to installation (28 days). If sealants are used, do not use one with a petroleum base. Old concrete must be repaired and have joint sealants and fillers installed as necessary. All cracks or flaws should be filled in or repaired prior to covering with rubber products. Use patching materials as appropriate. Surface must be thoroughly cleaned of dirt, dust, grease, or other foreign matter by shot blasting (or other mechanical means) with a commercial degreaser and allowed to dry completely before beginning installation. Any separation of concrete layers, heaving, etc. is the sole responsibility of the installer and/or owner.

B - Wood Base:

Wood surfaces should be completely cleaned of dirt, dust, grease or other foreign matter and be completely dry prior to installation. Trapped moisture may rot the wood or interfere with installation adhesives. Nails or other protrusions should be pounded down or removed, holes repaired, and surface variances repaired within the 1/8" acceptable variance level. The wooden subsurface should be properly secured to the ground to avoid any ground shifting. The subfloor should be protected and sealed from moisture prior to installation of Eco-Play Safety tiles. The sealer should be completely dry before installation and compatible with Chemrex® CX-941.

C - Asphalt:

Asphalt requires the same preparation as concrete. However, due to variations in asphalt substrates, it is the user's responsibility to check the adhesion of the cured adhesive on typical test areas at the project before application. Asphalt subsurface must be hard, level, and free of grease, oil and other contaminants.

AVOID INSTALLATION ON NEW ASPHALT UNTIL SURFACE OIL HAS HAD TIME TO DISSIPATE (30 DAYS AFTER COMPACTING) AND DRAINAGE CAN BE EVALUATED. Any separation of asphalt or blacktop layers, heaving, etc. is the sole responsibility of the installer and/or owner. Ensure good drainage of the area by either a well-defined gradient of the surface or well-placed drainage pipe in lower spots of the area.

Permanent Installation & Application

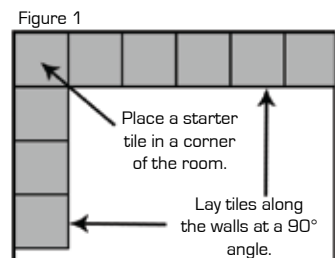
1. Ensure that starter rows of tiles are firmly in place by wedging. Once initial rows are secure, use Chemrex® CX-941 in a wet-lay or walk-on-work method of installation.
2. Wet-lay method: Apply adhesive to substrate with an appropriate trowel. Immediately place flooring into the wet adhesive. No flashing required. **NOTE: Do not apply more adhesive than can be covered in 30 minutes or the adhesive transfer could be jeopardized.**
3. A 100 lb. roller must be used in the wet-lay method during all installations. It must be rolled again within 30 minutes. Uneven flooring should be tacked, weighted or rolled to ensure good contact between the flooring and the substrate.
4. Chemrex® CX-941 is a one part "glue" and is ready to use when poured out of container. Do not open container prior to time for use in installation. A misting of water may be applied to the adhesive and will act as a catalyst to decrease cure time. Adhesive is spread in a thick film coat on the base surface and each gallon will adhere approximately 60 feet² of surfacing.

Indoor Installation

Permanent installations should be handled by a trained professional installer with experience in rubber flooring installations. Assume that the walls/curbs that the tiles are abutting are not perfectly straight or square. Begin by laying down a starter tile in a corner of the room. Lay tiles along the adjacent walls until you reach the other corners at the end of the room, leaving out any tiles that must be cut to fit (Figure 1). Keep edges straight and aligned horizontally and vertically. Complete this procedure to ensure that the layout of the tiles is correct and to your liking. Special patterns or alignments made with the tiles may require a different placement method depending on preference.

If adhesives are needed:

Apply Chemrex® CX-941 Adhesive the length of the room or the length of the tiles, whichever ends first, within 20" from the wall. The adhesive should be applied thinly and evenly with a 1/8" X 1/8" X 1/8" "V" trowel for outdoor applications and a



1/16" X 1/16" X 1/16" "V" trowel for indoor applications (Chemrex® CX-941 adhesive will cover 60 ft.²/gallon). Do not apply more adhesive than can be utilized within a 30 minute window as there is approximately 30 minutes of open air time to apply the adhesive and maneuver the rubber tile onto the adhesive and position prior to curing onset. Wipe off excess adhesive on hands or on equipment with mineral spirits. Gloves are strongly suggested during application, as the Chemrex® CX-941 adhesive is aggressive on skin. **DO NOT allow mineral spirits to come into contact with the rubber.**

NOTE: IF USING ADHESIVE AFTER THE FIRST 60 MINUTES HAVE PASSED, AND THE ADHESIVE HAS BEGUN TO SET, THOROUGHLY ROLL THE FIRST SET OF TILES WITH A 50 - 100 LB. CARPET ROLLER TO ASSURE BONDING OF THE RUBBER TO THE ADHESIVE. BE CAREFUL NOT TO SHIFT THE TILES WHILE ROLLING. ROLLING SHOULD BE DONE AGAIN AT 75 MINUTES AND 90 MINUTES AFTER THE INITIAL PLACEMENT OF THE TILES ONTO THE ADHESIVE, BOTH WIDTHWISE AND LENGTHWISE. THIS WILL INSURE INTIMATE CONTACT AND ULTIMATE BOND.

Adhesive Clean-up Tips

Before troweling with Chemrex® CX-941, cover the unused portions of the trowel with duct tape. After troweling, tear off the tape before the material cures. Clean all tools and excess Chemrex® CX-941 immediately after use with mineral spirits. Use proper precautions when handling solvents. Cured adhesive can be removed by cutting with a mechanical tool. **DO NOT ALLOW MINERAL SPIRITS TO COME INTO CONTACT WITH THE RUBBER.**

Outdoor Installation

Outdoor installations typically require complete adhesion for maximum floor strength. Use the same procedures as in the indoor installation, using the Chemrex® adhesive process. Take note of the outdoor temperature when using adhesive, as it will affect the curing time. In some areas, evening or night installations are best due to extreme heat. Colored products installed outdoors will be subject to harsh UV rays, and as such may discolor.

Rubber Cutting Tips

Tips on cutting rubber: This procedure works best when using a recommended non-retractable utility knife. When using a utility knife, be sure to keep the blades sharp to aid in the cut, and help reduce the possibility of injury due to a dull blade.

- 1) Mark the material you will need to cut with chalk or a chalk line.
- 2) Put your straight edge on the corresponding marks you have placed on the rubber.
- 3) Holding the straight edge firmly in place, score the tile two or three times. This process may be made easier by cutting the tile on a raised surface such as the 2" x 4" wood block used during installation. Gravity will depress the cut edge down and away from the cut, and will be less likely to catch the knife blade.
- 4) Grab the rubber close to the score line, lift and bend the tile toward you in a tearing motion. The score line will "break open."
- 5) Make several more passes with the knife, working down the established cut, until the cut is complete.

Temporary Installation Using Connector Pins

For temporary installations or installations where adhesives are not desired, the Eco-Play Safety tiles can be installed with optional connector pins. The tiles can also be installed over compacted dirt, though a weed barrier should be put down between the dirt and the tiles. For installation over dirt, a wood frame or a perimeter of containment for the tiles is recommended for maximum effectiveness. Each edge of the tiles has 2 holes in which the plastic pins can be inserted.

To install the tiles with connector pins, it is easiest to insert the pins on two adjacent sides while they are sitting in a stack (before placing them on the ground). When the tiles are set on the ground, line up the tile with the pins in it next to the tile without pins. Insert the pins into the holes and push it in to close the gap as best possible. To seal the gap, use a rubber mallet to bang or push the tile (without the pin) in over the tile with the pin. Hit the tile at an angle a few times while trying not to hit the tile itself in the exact same spot (using a normal hammer and hitting the same spot more than once may damage the rubber tile with a dent).

Curing Times

Adhesives:

- Cure time is dependent on temperature and humidity. Times are based on 75° F (57° C) and 50% relative humidity.
- Firm set: 1 - 2 hours
- Light foot traffic: 12 - 24 hours
- Normal traffic: 48 hours
- Higher temperatures and humidity shorten the cure rate, while lower temperatures and humidity lengthen the time.

Non-Adhesive (Plastic Pins):

- Normal traffic: Immediate

