

# INSTALLATION RECOMMENDATIONS



## **Prior to Installation:**

The Kid Kushion tiles and transition pieces intended for this installation have been shipped to you on pallets with the tiles shrink wrapped and strapped. Once the packing is removed, please inspect the exposed edges for any damage. Next confirm shipment to packing list and notify supplier of any damage or shipment discrepancies.

SureStick adhesive is available in 1 gallon and 5-gallon containers. SureStick is a one-component, moisture curing polyurethane adhesive. It is used to adhere all tiles and perimeter pieces (e.g. ramps) to the subsurface. Store the adhesive in a dry place at a temperature between 60 and 80 degrees F. Adhesive should be used immediately after opening. Opened adhesive containers should be resealed, stored indoors at temperatures between 60 and 80 degrees F, and away from moisture, and used as soon as possible. Extended storage may lead to reaction with ambient moisture making the adhesive unusable.

Review engineering plans for layout and ensure that the Consumer Product Safety Commission recommendations for the use zone are met (Handbook for Public Playground Safety) and contact owner/agency with any discrepancies.

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## **SECTION 1 - Tools and Equipment Necessary for Installation**

- ✓ Two tape measures; 25 foot and 50 foot
- ✓ Rubber Gloves
- ✓ Safety Gloves
- ✓ Safety glasses
- ✓ Utility knife with heavy duty blades
- ✓ Chalk Line
- ✓ Carpenters Square
- ✓ 1/8 inch square notched trowels (2 minimum)
- ✓ Water Spray Bottles (if required)
- ✓ Rubber Hammer
- ✓ 1/2" Electric Drill
- ✓ Hole saw- (optional, to cut holes for equipment supports)
- ✓ Sabre saw and blades (7-10 TPI wood type blades)
- ✓ Weatherproof silicon sealant
- ✓ Caulk gun
- ✓ One and 5 gallon paint stirrers

## **SECTION 2 Subsurface Requirements for KID KUSHION**

KID KUSHION tiles are typically installed over concrete and asphalt, subsurface. Contact EMC or your Kid Kushion representative with questions about installation over other types of surface.

All subsurface should be properly excavated and installed to insure:

1. Subsurface drainage.
2. Non-Separation of concrete layers.
3. Prevention of Heaving due to freeze/thaw or unstable ground conditions.

The stabilization of the surface is the sole responsibility of the installer and/or owner.

Subsurface installation should assure good drainage of the area by either a well-defined gradient of the surface (minimum 2% slope is recommended) or a well-placed drainage pipe in lower spots of the installation.

### **Concrete Surfaces**

Concrete surfaces must be thoroughly cured and free from hydrostatic pressure before installing KID KUSHION tiles (minimum 28 days after pour). All surfaces should be clean, dry and contain no low spots that could pond water before applying adhesive for installation. A light broom finish is recommended for maximum adhesion. The concrete surface should be free from paint, dirt, oil, or other surface contamination before applying SureSTICK adhesive.

Any separation of concrete layers, heaving, etc. may result in separation of the installed safety surfacing and is the sole responsibility of the installer and/or owner.

Assure good drainage of the area by either a well-defined gradient of the surface (minimum 2% slope is recommended) or a well-placed drainage pipe in lower spots of the area.

### **Asphalt Subsurface**

Asphalt surface should be hard, free of grease, oil, and other contaminants and contain no low spots which could pond water. Avoid installation on new asphalt until surface oil has had time to dissipate (minimum 30 days after compacting) and drainage can be evaluated. Avoid very coarse aggregates or those with high fines content. Aggregate sizes between 3/8 inch and 1/2 inch are recommended.

Any separation of asphalt or blacktop layers, heaving etc. may result in separation of the installed safety surfacing and is the sole responsibility of the installer and/or owner.

Insure good drainage of the area by either a well-defined gradient of the surface (minimum 2% slope is recommended) or a well-placed drainage pipe in lower spots of the area.

## **SECTION 3 SITE LAYOUT**

1. Measure and mark the center points of two opposite sides of the proposed installation. Snap a chalk line between these center points. Measure and mark the center of this chalk line. From this point use a carpenter's square to establish a second line perpendicular to the first line. Snap a chalk line on this second perpendicular line. The intersection of these lines should be the center of the planned installation. The perpendicular chalk lines will be used to lay the first courses of tile. (Laying tile from the center outward will insure that the installation will be symmetrical, that is any trimming of edge tiles, if required, will be approximately equal on opposite sides of the installation.)

If it is not possible to begin at the center of the installation (e.g. because play equipment is on this spot), snap the chalk lines two feet, or in multiples of two feet, from the center of the installation. The first courses of tile should be laid from the intersection of these chalk lines, with subsequent courses of tile laid so that the use zone or tile area specified in the site plan is completely covered. (This may require laying different amounts of tile on different sides of the center point of the chalk lines.)

2. Use the right triangle method to check for squareness. Measure and mark one line 3 feet from the center point. Measure and mark a point on the perpendicular layout line 4 feet from the center point. Measure the (diagonal) line between these points. This distance should be exactly 5 feet. Make corrections (to squareness) if necessary.

## SECTION 4 – Installation

1. Insure that the base surface is clean, dry and contains no low spots which could pond water. Tiles must be dry. All play equipment, or play equipment support posts, must be permanently installed prior to tile installation.
2. Check ambient air temperature. Recommended ambient temperature for tile installation is 60 to 90 degrees F.

*EMC is not responsible for gapping or buckling that may occur due to installation outside of recommended temperatures.*

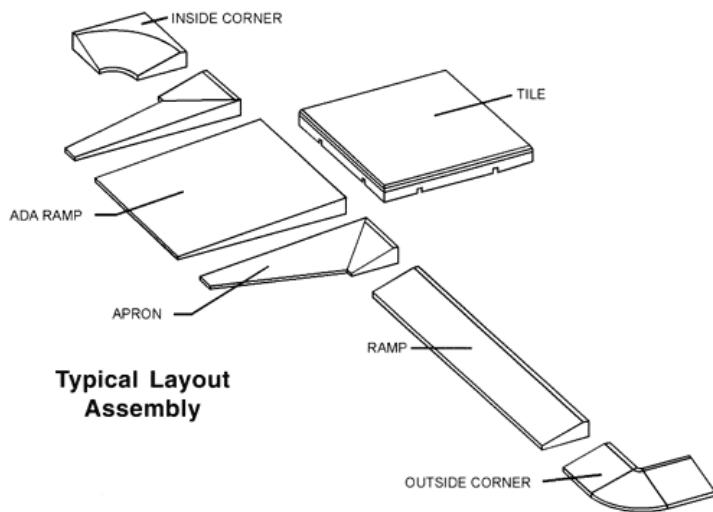
3. Kid Kushion Tiles are shipped to the project on pallets. Tiles should be laid out individually to allow them to acclimate. Kid Kushion Tiles are made with recycled rubber which will expand and contract with changes in temperature and exposure to sunlight. Tiles may expand beyond the published dimensions in high temperature conditions. The installer may need to measure and hand select tiles during installation to maintain straight course lines.
4. The initial tile courses should be laid along the two perpendicular course lines established in Section 3 Site Layout. Additional courses follow (abut) these initial tile courses until all tile are installed.
5. Cut openings in any tile to be installed around equipment support posts with a sabre saw and/or hole saw using a shipping pallet as a cutting table. Cutouts should be approximately ¼” larger than support posts in all directions. Any gaps between the edges of the tile opening and equipment post can be filled with silicon sealant after tile are installed and adhesive has cured.
6. Wear rubber gloves and safety glasses when working with SureStick adhesive. After opening the SureStick adhesive, if necessary, gently stir the adhesive to insure a homogeneous mixture

Apply the SureStick adhesive with a 1/8 in. square notched trowel to the subsurface (concrete or asphalt) where the first course of tile will be laid, covering an area slightly wider than the width of tile. Coverage rate for SureStick is 40 to 50 square feet per gallon. In general coverage over asphalt is somewhat less than that over concrete. However installers should monitor adhesive application to insure that an

adequate thickness of adhesive (minimum one millimeter/.04 inch thick) is always present. Set the tiles firmly into the adhesive. Continue this process with subsequent courses of tile until all tiles are installed.

7. After all tiles have been laid install transition ramps, corners and, if appropriate, accessible ramps, with SureStick adhesive. Abut the ramps, corners and accessible ramps (if used) against the outer course of tiles. If drainage is a concern, allow a ¼ inch gap between each ramp piece for drainage. Proper installation of these items is shown in the schematic below.

#### Perimeter Finish Details



8. Cutting tile edges should be avoided if possible. If cutting is required, for example to abut a wall or containment perimeter, tile may be cut with a sabre saw or utility knife and straight edge, again using a shipping pallet as a cutting table. Cut tile edges should **never** be left exposed or abutting another tile, but rather always being abutted to a containment perimeter or ramp edge.

If necessary ramps may also be cut using the procedure above.

9. The SureStick adhesive should cure within 24 hours if installed at recommended installation temperatures (60 to 90 degrees F) and at  $\geq 50\%$  relative humidity. Under very dry conditions a light mist of water (about 11 ounces per 100 sq. ft. of adhesive) can be applied to the adhesive prior to setting the tiles to facilitate curing.



10. After adhesive has fully cured any gaps between cut tile and equipment support posts should be filled with weatherproof silicone construction sealant.
11. Allow a minimum of 24 hours before allowing any traffic or activity on the tile surface.

## **SECTION 5 - Disclaimer**

These installation guidelines represent a typical installation and generally accepted installation practices should be followed. Use of trained installation professionals is recommended for best results.

EM Concepts ("EMC") does not warrant any installation work and specifically disclaims liability for any direct or indirect personal injury, property damage or other costs or losses resulting from incorrect or inadequate installations.