



High-Performance Fitness Flooring



Please read this manual thoroughly before installing
your **LokTuff** recycled rubber flooring.



High-Performance Fitness Flooring

01 installation guide



Humane Manufacturing Company, LLC.
805 Moore Street
Baraboo, Wisconsin 53913

WEB
www.humanemfg.com

TEL
(608) 356-8336

TOLL-FREE
(800) 369-6263

FAX
(608) 356-8338



general packaging information

Packaging: All LokTuff products are packaged on skids and banded to protect the contents.

Product: Heavy-duty, interlocking recycled rubber floor tiles

Thickness tolerance: 3/8" mats $\pm .035$; 1/2" mats $\pm .040$; 3/4" mats $\pm .045$; 1+" mats $\pm .060$

Dimensions: length range - 48.000" to 48.300" ; width range - 72.000" to 72.500" on 4'x6' mats (straight edge)

introduction

LokTuff is a high-durability floor covering system that is made from 99% recycled premium rubber, free of wire and fiber contaminants. LokTuff is available in a variety of colors, and has a tough, non-porous surface that is built to provide an impressive service life.

LokTuff's precision waterjet-cut interlock design eliminates the need for adhesive, and will never curl or separate. Once installed, LokTuff is virtually maintenance-free: because it is vulcanized rubber, it is completely non-absorbent and will not harbor bacterial growth.

When your flooring requirements change, LokTuff can be removed and repositioned without marking or staining. Simply rearrange or add to your flooring installation as needed!

LokTuff is designed for use in gyms and fitness facilities, schools and community centers, ice arenas and hockey rinks, and any other environment where highly-durable, impact-absorbing flooring is desirable.

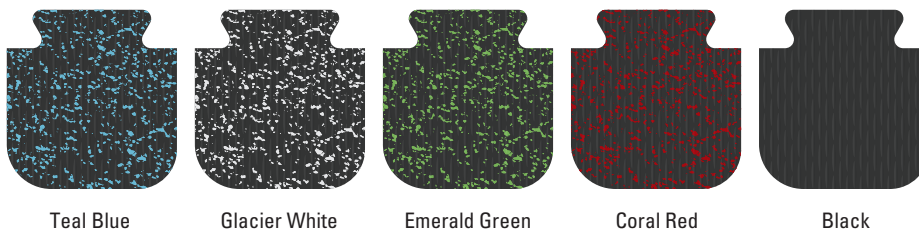
LokTuff is carefully inspected, and manufactured to the highest standards of quality for a precision fit and long life – but all materials should be re-inspected for damage and defects prior to installation. Humane Manufacturing Company is not responsible for installation costs that are incurred as a result of the installation of damaged or defective product.



Important: LokTuff is not intended for use in areas where it will be exposed to petroleum-based solvents or fuels. We strongly advise against the use of adhesives for installation of LokTuff flooring.

Occasionally the color granules may appear to be distributed unevenly across your tiles: this is normal, and changing your tile arrangement can help to balance color distribution in a more pleasing way. Install tiles the same-side-up as received - do not flip them over.

Slight variations may be visible in the surface color and texture of your tiles. These are a common occurrence in the manufacture of recycled rubber products. They do not indicate a change in the quality of the mat, and they will become less visible over time. They should not be considered a defect, and are not covered by the product warranty.



Teal Blue

Glacier White

Emerald Green

Coral Red

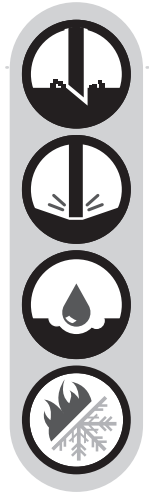
Black



storage and handling

While LokTuff is extremely durable, reasonable care should be taken to protect your flooring from damage during storage and prior to installation. Exposure to extremes of heat and cold, extreme long-term compression, industrial solvents/adhesives, cuts, and punctures are all possible sources of damage. Mats are also susceptible to crushing damage if stored in a folded state.

Mats should be removed from packing materials, unstacked, and stored safely in the environment where they will be installed for at least 48 hours prior to installation. This allows the mats to achieve a stable temperature and recover from any compression that may have occurred during shipping and storage. Because rubber mats are subject to dimensional changes based on temperature, it is important that environmental conditions remain consistent during the installation process.



installation tools

No tools are required for free-standing installations – pieces are simply fitted together like a puzzle and positioned as desired.

For **precision-fitted installations**, the following tools are suggested:

- utility knife and supply of blades
- tape measure
- markers or grease pencil
- concrete blocks or weights (to flatten irregular areas)
- can of WD-40 (blade lubricant)
- jigsaw or reciprocating saw (optional, for complex contour cuts)
- chalk line
- safety gloves and glasses
- kraft paper or cardboard (to protect floor mats from weights)

subfloor preparation

For a problem-free installation, it is important that your subfloor surface be as clean and free of defects as possible. Rough or uneven installation surfaces can cause problems ranging from simply being unattractive, to being unsafe for your customers. Irregular subfloors can also cause uneven or excessive wear on your mats, significantly reducing their service life.

To maximize the quality and durability of your installation, we recommend the following preparation guidelines:

For wood subfloors:

- New wood subfloors should be COX exterior plywood, smooth-side-up
- Plywood should breathe for 48 hours prior to installation of flooring
- All fasteners should be caulked and surface-sealed with epoxy
- Subfloor should be thoroughly cleaned and stripped of any previous finishes
- Subfloor must be completely dry prior to installation of flooring
- All imperfections in the subfloor surface should be repaired with a cement-based leveling compound.

A smooth, **dry** subfloor is the key to a perfect installation.



For concrete subfloors:

- Concrete subfloors should be cured for a minimum of 6 weeks prior to installation of LokTuff flooring.
- The subfloor should be smooth, and leveled to a tolerance of 3.2mm per 1.8m
- We recommend that concrete floors be sealed before mats are installed.



It is vital that a moisture test be completed prior to floor installation. Moisture is the single most significant factor that mold to develop between the mats and the subfloor. Moisture tests must be taken on all concrete floors regardless of age and grade level.

1. Test shall be in accordance with ASTM F-1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub-floor Using Anhydrous Calcium Chloride.
2. One test should be conducted for every 1000 sqft of flooring and the results not exceed 3 lbs per 1000 sqft in 24 hours.
3. If test results exceed limitations, the installation must not proceed until the problem has been corrected.
4. All test results must be kept on file and be accessible upon request.
 - a. If lightweight concrete has been used in construction do not use the F1869 test.
 - b. Use ASTM F2170, the Relative-Humidity Test, as an alternate in these cases.
 - c. If poured-gypsum underlayment has been used, check with the underlayment manufacturer on how to test for dryness. Never use calcium chloride testing with gypsum underlayment.
 - d. Ensure existing concrete floors are clean, dry and smooth.
 - e. Remove any wax, paint, varnish, adhesive or any other material
 - f. Repair any low spots with a cementitious based latex patch mix.
 - g. Fill and smooth any rough or porous concrete sub-base prior to installing flooring.

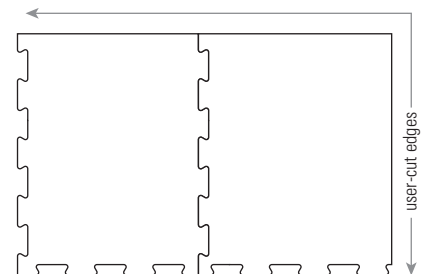
For concrete subfloors with radiant heating systems:

- Floor surface temperature must not exceed 24°C (75°F) during normal operation.

installation

Despite its durability, LokTuff can be cut effectively using the proper tools. A good utility knife with a supply of fresh blades and a metal straightedge will facilitate most installation needs, and a jigsaw or reciprocating saw can be used in cases where a knife does not provide the necessary control. Applying WD-40 to the blade of your cutting tool will allow you to cut through the rubber with very little resistance. In fact, we recommend additional caution when using a lubricated blade - your knife will cut *very* quickly through the LokTuff material.

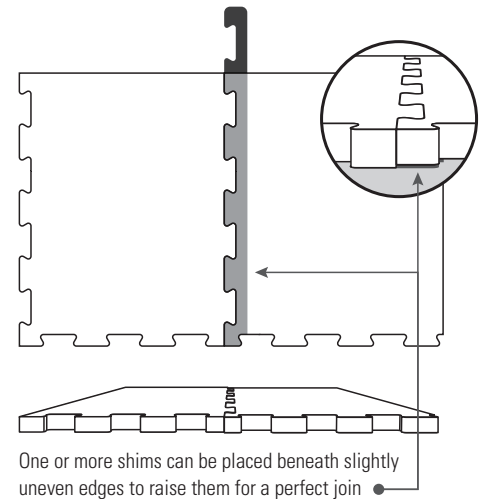
- Making repeated, gentle passes with the blade will allow for more precise knife cuts. It is not necessary to cut completely through the mat in one stroke.
- Markers or grease pencils can be used to mark cut lines and environmental details directly onto the surface of LokTuff mats. These marks can easily be removed later during normal cleaning and maintenance.
- Install mats with factory edges adjoining whenever possible and place user-cut edges along walls or vertical surfaces to minimize visible irregularities.





installation (continued)

- Tile fit should be tight, but free of torsion or compression to avoid gaps.
- If you are working with non-interlocking mats, some movement may occur when equipment is first placed on the mats. There is no need for concern: once the equipment is in place, the mats will lay flat and no further movement should occur. Please note that the heavier the equipment to be placed on the mat, the thicker the mat should be. Diamond surface should be facing upward.
- During installation, do not use duct tape or high-grab masking tape to secure edges or create temporary anchors. These types of tape use adhesives that can react chemically with LokTuff and leave a permanent residue behind.
- For optimal results, environmental temperatures during installation should be maintained between 60°F and 75°F at a relative humidity of 65%. These conditions should be maintained 48 hours prior to installation, and for a minimum of 72 hours after installation is complete.
- To correct minor thickness variation, insert one or more of the fitted plastic shims (shims are available upon request) under the edges of misaligned tiles to level for a perfect fit.



maintenance



IMPORTANT: LokTuff flooring should never be cleaned with petroleum-based cleaners or solvents. Similarly, any fuels or lubricants spilled on your flooring should be cleaned-up immediately to prevent damage to the mats and potentially voiding of warranty.

While you may notice that your LokTuff flooring appears to attract and show soil easily, it will mature to form a very easy-to-clean surface with normal wear and maintenance – this initial break-in period is normal, and typically lasts 4-6 months.

LokTuff flooring does not require any applied finishes, sealers, or waxes. Regular cleaning and maintenance are the only steps required to care for your floors, and any applied finishes may damage LokTuff tiles or alter their performance in undesirable ways.

Initial or restorative cleaning:

To be performed immediately after installation, and on an as-needed basis thereafter. LokTuff flooring can be cleaned immediately following installation if no adhesives have been used. **Adhesives are NOT recommended for standard installation of the LokTuff product.**



Note: Do not allow cleaning water to pool beneath equipment on your flooring - rust may develop, permanently staining your mats.


1. Sweep or vacuum flooring to remove all debris
2. Apply an appropriate water-based cleaning solution such as Scented Pine-Sol, Simple Green, Dawn Dish Liquid, or a bleach-and-water solution to the flooring. Work in small sections so that the cleaning solution remains wet at all times.

(continued)



maintenance (continued)


3. While still wet, scrub the flooring using a rotary buffing machine (if available) fitted with a medium Scotch-Brite™ pad. Never use coarse scrubbing pads, steel wool, or abrasive brushes when cleaning your LokTuff flooring - these items may damage the mats and void your warranty.
4. After scrubbing, remove solution using a wet/dry vacuum or squeegee extractor.
5. Damp-mop flooring with clean water to rinse any remaining detergent residue, and repeat vacuuming or squeegee extraction. Please note that insufficient rinsing can lead to the accumulation of soap residue on your flooring.
6. Prevent any traffic on flooring until it has dried completely.

 **Note:** For **residential installations** where industrial cleaning equipment is not available, we recommend the following:

1. If possible, leave mats outside and un-stacked for a 72 hour period to ventilate.
2. Sweep or vacuum any debris after installation
3. Mop with a 50% solution of our recommended cleaners:
4. Repeat step 3 above for four consecutive days. Proper ventilation is important to reducing the odor, but it will dissipate over time.

Maintenance cleaning *(To be performed as necessary - recommended once per week):*

LokTuff flooring can be spot-cleaned at any time simply by sweeping or vacuuming loose debris, then applying an appropriate water-based detergent and a damp mop or a soft nylon-bristle brush. No special preparation is required for basic cleaning, though we recommend that any standing water or excessive moisture be removed immediately with a wet/dry vacuum or squeegee extractor after cleaning to prevent water from pooling beneath equipment.

 **Note:** Nylon mops are recommended for cleaning your flooring - cotton mops can leave visible particles on your floors.

precautions

- Equipment placed on your flooring should not exceed the rated capacity for the thickness of the material installed. For optimum performance, make sure that weight is evenly distributed and that legs or wheels are appropriately capped where they come in contact with the mats to avoid permanent scratches, gouges, or indentations in the rubber surface.
- When moving equipment across your finished LokTuff installation, take care to avoid damaging the flooring. We recommend the use of plywood or masonite as a barrier underneath equipment in transit to prevent damage to the flooring surface.
- Utility vehicles should not be used on your finished floors. Friction from spinning wheels or sudden stops can cause damage to the floor surface and distortions that can create gaps between your installed mats. If it is absolutely necessary to allow a vehicle on your flooring, operators should avoid fast stops and starts. Additionally, use of plywood or masonite as a barrier layer under the vehicle is advised.
- Food and beverages should be prohibited on LokTuff floors whenever possible. Strong food dyes can cause permanent stains on the flooring surface if left for an extended period.
- LokTuff flooring is designed to provide a safe and slip-resistant surface for skates and spikes, but regular use of these items will shorten the useful life of your flooring and can cause increased wear depending on the frequency of use.
- We recommend that you retain several scraps of flooring material following your floor installation. These scraps should be used for testing whenever there is concern that a cleaning solution or solvent might be potentially damaging to your floors.



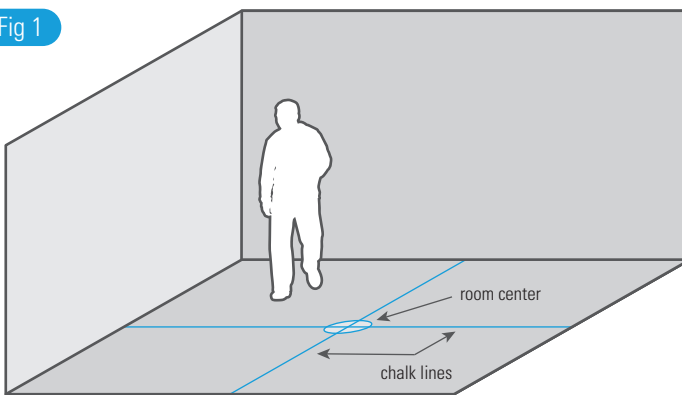
installation planning

Method 1: Center room start (uses all center tiles)

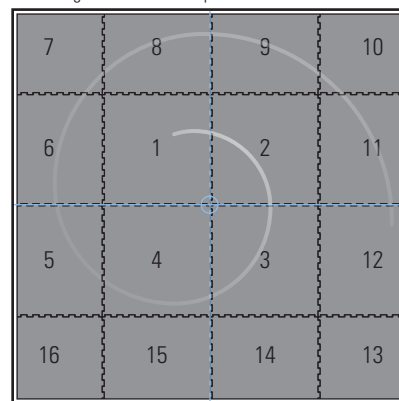
1. Locate the center of the room, and snap a chalk line down the center perpendicular to a wall.
2. Chalk another line perpendicular to the first so that the two lines intersect in the center of the room.
3. Begin mat installation from the point where the two chalk lines intersect, working outward in both directions (fig 1)

Note: Tap tiles as they are installed to ensure a tight fit.

Fig 1



outer edges trimmed to fit space



Method 2: Corner of room start (recommended for smaller projects, uses all center tiles)

1. Start in one corner with a full mat, keeping an interlocking edge piece (or trimmed edge) on the two adjoining sides that will be against the corner walls. Continue laying one row of full mats across the room, leaving the interlocking edges on the side along the wall, trimming the last mat to fit.
2. Using the trimmed piece, go back to the starting point and start the next row - this will minimize cutting waste. If the final row of mats needs to be cut to fit, the trim pieces will be waste.

Fig 2



Note: Trimmed pieces can only be rotated in their original orientation, they cannot be flipped over to fit in another direction.

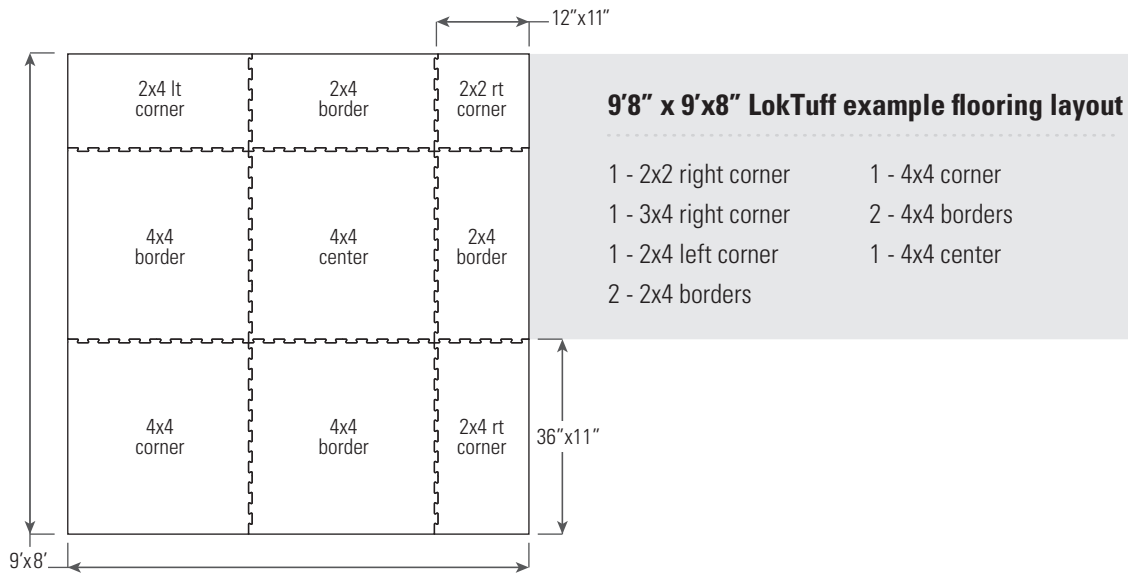


installation planning (continued)

Method 3: Custom-fitted installation (uses planned tile configurations)

With our **4'x4' system** we have literally hundreds of area designs that are CAD-ready to cut and include plan drawings for layout assistance. They start as small as 7'9" x 7'9" and cover areas as large as 60' x 100'. If you have a space with lots of corners and doorways, we can also calculate the number of mats needed and create a layout for you. These areas can be created with beveled edges for specific areas (such as doorways) or straight edges for walls. One person can install about 15 mats per hour when using custom-planned installations, since hand-cutting is not required.

example layout





LokTuff standard pre-cut tile sizes

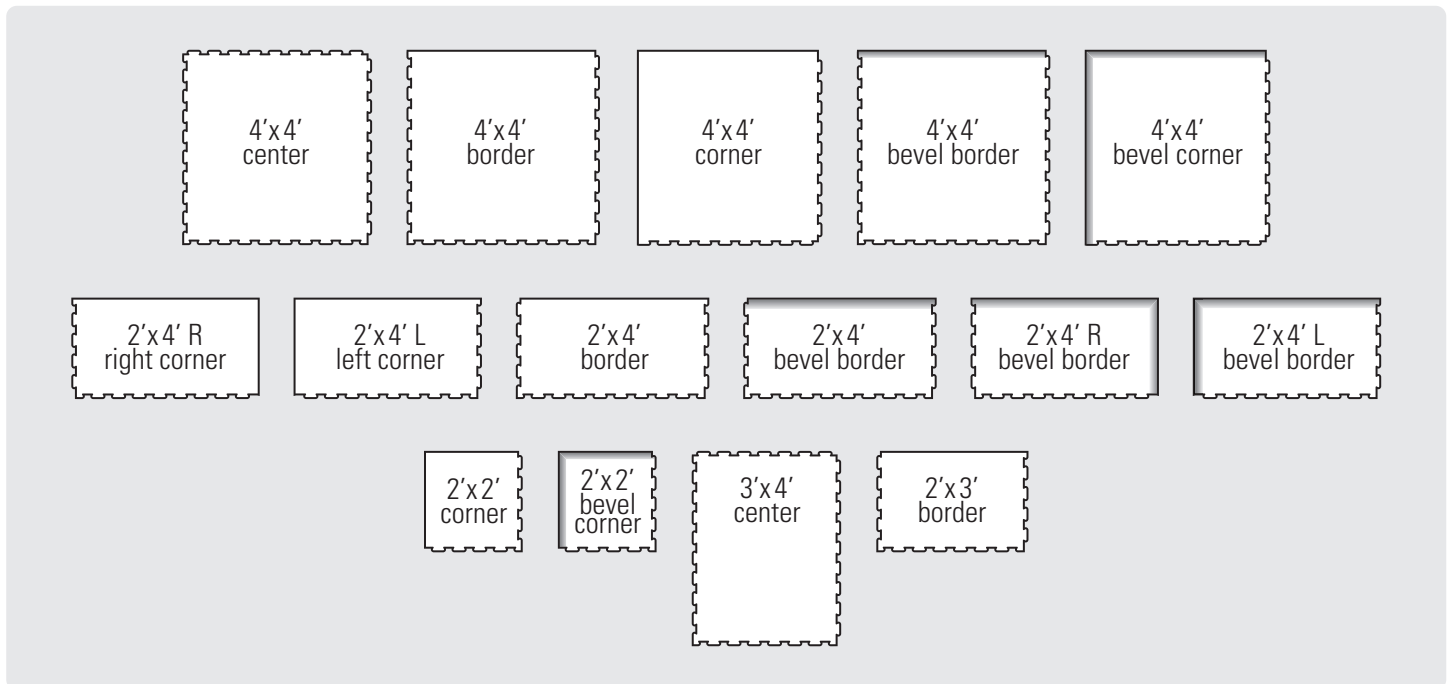
Available options: (with beveled or non-beveled outside edges)

3/8" and 1/2" thickness:

4' x 4' interlocking centers, borders and corners
 2' x 4' interlocking borders and corners
 2' x 2' interlocking corners

3/4" thickness:

2' x 4' centers
 2' x 3' borders
 2' x 4' borders
 2' x 2' corners



disclaimer

While this installation guide attempts to represent the conditions of a typical installation, every site is different and Humane Manufacturing Company does not claim to have covered all contingencies.

Humane Manufacturing Company does not warrant installation work and disclaims all liability for any personal injury, property damage, or other costs - direct or indirect - resulting from installation or application of its products. Please see the LokTuff Limited Warranty document provided with your purchase for specific details of warranty coverage.

LokTuff flooring is not designed to be used for any purpose other than resilient recreational floor covering. No other use is implied or warranted.



Humane Manufacturing Company, LLC.
805 Moore Street
Baraboo, Wisconsin 53913

WEB
www.humanemfg.com

TEL
(608) 356-8336

TOLL-FREE
(800) 369-6263

FAX
(608) 356-8338