Product	
Supplier	Flooring2
Product Type	Carpet Tile
Number	LU
Name	Luminous

Carpet Tile Installation Guide (Glue-Down / Loose-Lay)

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Legal Disclaimers

> **IMPORTANT: READ BEFORE INSTALLATION**

Limitation of Liability
This guide provides general installation information only. We are not responsible for installation errors, product damage, personal injury, or property damage resulting from the use of this guide. Actual results depend on site conditions, installer skill, and adherence to all applicable codes and standards.

General Information Notice
This guide covers glue-down and loose-lay installation methods for modular carpet tiles. Product specifications may vary between product lines.

Professional Consultation Recommended
We recommend consulting a licensed flooring professional before installation for commercial applications or complex layouts.

Assumption of Risk
By proceeding with installation, you assume all risks associated with flooring installation, including but not limited to physical injury, property damage, and voiding of product warranties due to improper installation.

Safety Warnings

Regulatory Compliance

Before beginning any flooring installation, ensure compliance with:

- **OSHA Standards** - Follow workplace safety requirements (29 CFR 1926 for construction)
- **EPA Regulations** - Proper handling and disposal of materials
- **Building Codes** - Comply with International Building Code (IBC) and International Residential Code (IRC)
- **Lead Safety** - For structures built before 1978, follow EPA RRP Rule requirements
- **Asbestos Requirements** - For structures built before 1981, have existing flooring tested before removal

Personal Protective Equipment (PPE)

Equipment	When Required
Respiratory Protection	N95 mask when removing old flooring or working with adhesives
Eye Protection	Safety glasses during cutting
Hand Protection	Work gloves when handling materials and adhesives
Knee Protection	Knee pads for floor-level work

Health Hazards

> **Chemical Exposure:**
>
> • Work in well-ventilated areas when using adhesives
> • Review Safety Data Sheets (SDS) for adhesive products
> • Store chemicals according to manufacturer guidelines
>
> **Dust and Allergens:**
>
> • Old flooring removal releases dust and allergens
> • Use appropriate respiratory protection during removal
> • Clean thoroughly before installation
>
> **Physical Strain:**
>
> • Material boxes can be heavy
> • Use proper lifting techniques
> • Use knee pads for extended floor work

Emergency Procedures

Situation	Action
Adhesive Contact (Skin)	Wash immediately with soap and water for 15 minutes
Adhesive Contact (Eyes)	Flush with clean water for 15 minutes, seek medical attention
Cuts from Knife	Apply pressure, clean wound, seek medical attention for deep cuts

Emergency Contacts:

• Poison Control: 1-800-222-1222
• Local emergency services: 911

Pre-Installation Preparation

Tools and Materials Needed

Installation Tools:

• □ Tape measure (minimum 25 ft / 7.6 m)
• □ Chalk line or laser level
• □ Utility knife with extra blades
• □ Straight edge or metal ruler (36" minimum)
• □ Notched trowel (per adhesive specifications)
• □ 75-100 lb floor roller
• □ Pencil or marking tool
• □ Carpenter's square or framing square

Materials:

• □ Carpet tiles (calculate coverage + 5-10% for waste and replacements)
• □ **Adhesive: MAPEI ECO 811** (for glue-down method)
• □ **Primer: Appropriate MAPEI primer for subfloor type**
• □ Adhesive tabs (for loose-lay method, edges and transitions)
• □ Transition strips

Safety Equipment:

• □ Safety glasses
• □ Work gloves
• □ Knee pads
• □ Dust mask

Common Tile Sizes

Size	Imperial	Metric	Coverage
Standard	18" x 18"	45.7 cm x 45.7 cm	2.25 sq ft per tile
Large	24" x 24"	61 cm x 61 cm	4 sq ft per tile
European	19.7" x 19.7"	50 cm x 50 cm	2.69 sq ft per tile
Plank	9" x 36"	23 cm x 91 cm	2.25 sq ft per tile

Room Preparation

1. **Remove all furniture** - Clear the entire installation area
2. **Remove existing flooring** - If applicable, dispose of old materials properly
3. **Clean the subfloor** - Remove all debris, dust, adhesive residue, and contaminants
4. **Undercut door frames** - If needed for tile thickness (typically 1/4" - 3/8")
5. **Ensure room is temperature controlled** - HVAC must be operational

Subfloor Requirements

CRITICAL RESTRICTION: Carpet tiles are NOT approved for glue-down installation over particle board subfloors. This restriction is absolute and cannot be waived.

Flatness Specification:

- Maximum variance: 1/8" over 10 feet (3 mm over 3 m)
- Carpet tiles are less forgiving than broadloom
- Fill low spots with leveling compound
- Sand or grind down high spots

Acceptable Subfloor Types:

- □ Concrete (fully cured, minimum 60 days)
- □ Plywood (minimum 1/4" / 6 mm exterior grade)
- □ OSB (minimum 1/4" / 6 mm)
- □ Existing vinyl flooring (single layer, well-bonded, smooth)
- □ Existing hard tile (if level and well-bonded)

NOT Acceptable:

- Particle board (absolutely prohibited for glue-down)
- Carpet or carpet pad
- Cushion-backed vinyl
- Unsealed or dusty concrete
- Uneven or damaged subfloors

Moisture Testing Requirements:

Subfloor Type	Test Method	Maximum Reading
Concrete	Calcium Chloride (CaCl)	3 lbs per 1,000 sq ft / 24 hrs
Concrete	Relative Humidity (RH)	85% RH
Wood	Pin-type moisture meter	12% moisture content

Climate Requirements

Required Conditions:

- Temperature: 65F - 85F (18C - 29C)
- Relative Humidity: 35% - 55% RH
- Maintain conditions 48 hours before, during, and 48 hours after installation

Acclimation:

- Store carpet tiles in installation area for 24-48 hours
- Open boxes and spread tiles if possible
- Allow tiles to reach room temperature
- Tiles should be flat, not warped

Adhesive Requirements (Glue-Down Method)

REQUIRED PRODUCTS - NO SUBSTITUTIONS

Required Products

Product	Specification
Adhesive	MAPEI ECO 811
Primer	Appropriate MAPEI primer for subfloor type
Application	Troweled only (rolling NOT permitted)

Application Method

1. **Apply primer first** - Allow to dry completely per MAPEI specifications
2. **Trowel adhesive** - Use recommended notch trowel size
3. **Do NOT roll adhesive** - Troweling is required
4. **Follow open time guidelines** - Per MAPEI technical data sheets
5. **Spread manageable sections** - Only what you can cover within working time

WARNING: Using non-approved adhesives or improper application methods will void the product warranty.

Installation Methods

Method 1: Full-Spread Glue-Down

Best For: Commercial installations, high-traffic areas, permanent installations

Requirements:

- Clean, properly prepared subfloor (no particle board)
- MAPEI ECO 811 adhesive
- Appropriate MAPEI primer

Step-by-Step Instructions

Step 1: Find Room Center

- Measure and mark the center point of the room
- Snap chalk lines creating perpendicular axes
- Use 3-4-5 triangle method to ensure lines are square
- Dry-lay tiles along chalk lines to verify layout

Step 2: Plan Layout

- Lay tiles from center toward walls (dry, no adhesive)
- Adjust starting point if border tiles would be less than half-width
- Check that pattern alignment is satisfactory
- Mark final reference lines

Step 3: Prepare Subfloor

- Clean subfloor thoroughly
- Apply MAPEI primer per MAPEI specifications
- Allow primer to dry per MAPEI specifications

Step 4: Apply Adhesive

- Start at center point
- Trowel adhesive in one quadrant at a time
- Use recommended notch trowel at 45-degree angle
- Spread only 100-150 sq ft at a time
- Allow adhesive to become tacky (finger test: transfers but strings)

Step 5: Install Tiles

- Begin at intersection of chalk lines
- Place tiles firmly into adhesive (do not slide)
- Butt edges tightly together
- Follow chosen pattern (monolithic, quarter-turn, brick, etc.)

- Use hand pressure to ensure contact
- Work toward walls, completing one quadrant at a time

Step 6: Cut Border Tiles

- Measure each border tile individually
- Cut with utility knife and straight edge
- Cut pile-side down for cleanest edge
- Leave 1/8" - 1/4" (3-6 mm) gap at walls
- Install cut tiles against walls

Method 2: Loose-Lay Installation

Best For: Light traffic residential applications, raised access floors, areas needing easy replacement

Important: Loose-lay installation is suitable for light traffic areas only. This method is NOT recommended for areas with rolling loads (chairs, carts, etc.) or heavy foot traffic. For high-traffic or rolling load areas, use the glue-down method.

Requirements:

- Tiles rated for loose-lay installation
- Clean, level subfloor
- Light traffic expected (no rolling loads)

Step-by-Step Instructions

Step 1: Layout (Same as Glue-Down)

- Find room center
- Snap chalk lines
- Dry-lay to verify layout
- Adjust for optimal border tile size

Step 2: Begin Installation

- Start at center intersection
- Place tiles along chalk lines
- Butt edges together firmly
- Work outward toward walls

Step 3: Continue Pattern

- Maintain chosen pattern direction
- Check alignment every few rows
- Tiles rely on weight and friction to stay in place
- Ensure tiles are flat and interlocked

Step 4: Secure Perimeter

- Use adhesive tabs at doorways and transition points
- Apply adhesive tabs at perimeter tiles for added stability
- Follow adhesive tab manufacturer's placement guidelines

Step 5: Cut and Install Border Tiles

- Same cutting technique as glue-down
- Leave small gap at walls for expansion
- Install baseboards or wall base to cover gap

Tile Patterns

Common Installation Patterns

Monolithic (Ashlar)

- All tiles oriented the same direction
- Arrow on backing points same way
- Creates uniform appearance
- Best for simple designs

Quarter-Turn (Parquet)

- Each tile rotated 90 degrees from adjacent tiles
- Creates checkerboard effect with pile direction

- Popular for commercial installations
- Hides seams effectively

Brick/Ashlar Offset

- Tiles staggered like brick pattern
- Usually 50% or 33% offset
- Common for plank tiles
- Creates visual interest

Random

- Tiles oriented randomly
- Mix pile directions
- Creates organic appearance
- Requires more tiles for replacement matching

> **Note:** Check arrow markings on tile backing before installation to maintain chosen pattern.

Finishing Touches

Transitions and Moldings

Transition Type	Use Case
Flat transition	Between carpet tile and same-height flooring
Reducer	Carpet tile to lower flooring
Metal edge	Exposed edges at doorways
Wall base (cove)	Along walls in commercial applications

Final Steps

1. **Roll the floor** - With 75-100 lb roller in both directions (glue-down)
2. **Clean tiles** - Vacuum to remove installation debris
3. **Inspect alignment** - Check all seams are tight and aligned
4. **Install transitions** - Secure to subfloor at doorways
5. **Install wall base** - Cover perimeter gaps
6. **Replace furniture** - Use furniture cups or glides

Traffic Restrictions

Glue-Down:

- Light foot traffic: After adhesive has tacked (typically 2-4 hours)
- Normal use: After 24 hours
- Heavy furniture: After 48 hours

Loose-Lay:

- Light foot traffic: Immediately
- Normal use: Immediately
- Heavy furniture: 24 hours (allow tiles to settle)

Room-Specific Considerations

High-Traffic Commercial Areas

- Use glue-down method for stability
- Consider commercial-grade tiles with higher wear rating
- Plan for easy replacement of worn tiles
- Keep extra tiles from same dye lot for repairs

Offices

- Carpet tiles are ideal for offices
- Consider access floor compatibility
- Plan around furniture layouts
- Use quarter-turn pattern to minimize wear patterns

Hallways and Corridors

- Consider running pattern direction for visual lengthening
- Glue-down recommended for high traffic
- Plan seam locations carefully
- Use transition strips at doorways

Basements

- Conduct thorough moisture testing
- Moisture mitigation may be required before installation
- Consider tiles with moisture-resistant backing
- Glue-down with proper primer recommended

Raised Access Floors

- Use loose-lay method
- Tiles must be compatible with access panels
- Coordinate tile layout with panel grid
- Allow access to utilities beneath floor

Radiant Heat Systems

Pre-Installation Requirements:

- Hydronic radiant heat systems only
- Maximum floor surface temperature: 85F (29C)
- System operating 2 weeks before installation
- Reduce temperature to 65F (18C) 5 days before installation
- Verify tiles are rated for radiant heat

Post-Installation:

- Gradually increase temperature (5F / 2.8C per day max)
- Never exceed product's temperature rating

Quality Control Checklist

Pre-Installation

- □ Subfloor is NOT particle board (glue-down verified)
- □ Subfloor flatness verified (1/8" over 10 ft maximum)
- □ Moisture testing completed and documented
- □ Materials acclimated for 24-48 hours
- □ Environmental conditions verified (65-85F, 35-55% RH)
- □ Center point and chalk lines established
- □ Layout verified with dry-lay
- □ All materials and tools on site

During Installation

- □ Primer applied and dried (glue-down)
- □ Adhesive troweled properly (NOT rolled)
- □ Proper tack time observed
- □ Tiles placed (not slid) into position
- □ Pattern direction consistent
- □ Seams tight with no gaps
- □ Tiles flat with no tenting

Final Inspection

- □ All tiles firmly adhered (glue-down)
- □ No visible gaps between tiles
- □ Pattern alignment correct throughout
- □ Border tiles properly cut and fitted
- □ Transitions installed
- □ Wall base installed
- □ Floor clean and vacuumed
- □ Leftover tiles stored for replacements

Troubleshooting

Tiles Lifting or Curling

Cause: Inadequate adhesive, moisture issues, or temperature changes

Solution:

- Re-adhere tiles with proper adhesive
- Address any moisture issues
- Ensure environmental conditions are maintained

Prevention:

- Use correct adhesive and application method
- Allow proper tack time
- Roll floor after installation

Gaps Between Tiles

Cause: Improper installation, tile shrinkage, or subfloor movement

Solution:

- Remove and reinstall affected tiles
- Butt edges together tightly

Prevention:

- Push tiles together firmly during installation
- Maintain consistent room temperature
- Use glue-down method for problematic areas

Pattern Misalignment

Cause: Chalk lines not square or tiles installed without reference

Solution:

- May require removal and reinstallation
- For small areas, adjust subsequent tiles to compensate

Prevention:

- Verify chalk lines are square (3-4-5 method)
- Check pattern alignment frequently during installation
- Use backing arrows for consistent orientation

Visible Seams

Cause: Pattern choice, pile direction, or tile damage

Solution:

- Quarter-turn pattern reduces seam visibility
- Replace damaged tiles
- Ensure consistent pile direction

Prevention:

- Choose appropriate pattern for space
- Inspect tiles for damage before installation

- Handle tiles carefully

Professional vs DIY

DIY Suitable For

- Small to medium rooms (under 500 sq ft)
- Simple rectangular layouts
- Loose-lay installations
- Homeowners with moderate DIY experience
- Flat, properly prepared subfloors

Professional Installation Required For

- Large commercial areas
- Complex layouts with many cuts
- Glue-down installations without experience
- Areas requiring moisture mitigation
- Raised access floor systems
- When warranty requires professional installation

Care and Maintenance

Daily Care

- Vacuum high-traffic areas frequently
- Spot clean spills immediately
- Use walk-off mats at entrances

Regular Cleaning

- Vacuum entire floor weekly
- Use extraction cleaning periodically
- Rotate tiles from low-traffic to high-traffic areas (if loose-lay)

Spot Cleaning

1. Blot spills immediately (do not rub)
2. Work from outside of stain toward center
3. Use approved carpet cleaning solution
4. Rinse with clean water
5. Blot dry with clean towels
6. Allow to dry completely

Tile Replacement

One major advantage of carpet tiles is easy replacement:

1. Remove damaged tile (pry up if glued)
2. Clean subfloor
3. Apply adhesive if using glue-down method
4. Install replacement tile from same dye lot
5. Align pattern direction

> **Tip:** Keep extra tiles from original installation for seamless replacement.

Products to Avoid

- Bleach or harsh chemicals
- Excessive water
- Steam cleaners
- Aggressive scrubbing

Additional Resources

Industry Associations

- Carpet and Rug Institute (CRI)
- Floor Covering Installation Contractors Association (FCICA)
- World Floor Covering Association (WFCA)

Certification Programs

- CFI Certified Flooring Installers
- INSTALL Flooring Certification
- CRI Seal of Approval Products

Warranty Information

See separate warranty brochure for complete warranty terms and conditions.

This installation guide is provided for general reference. Always consult local building codes before installation.