

COMPOSITE MATTING INSTALLATION



COMPOSITE MATTING INSTALLATION GUIDELINES

Heavy-duty composite construction matting systems are engineered to provide a safe, strong, durable, all-weather solution for temporary site access and ground protection applications, including:

- Temporary Roads
- Equipment Stabilization
- Laydown Yards and Equipment Storage Areas
- Work Platforms
- Drill Pad Liner Protection
- Environmental Protection



Made with high performance plastic, the composite mats are lighter than wood mats, will not absorb water, oil or contaminants, are easy to clean and will not rot and degrade with continued use. The interlocking design facilitates load spread from mat to mat and creates a stable, smooth surface so mats will not hop and slide. The surface tread pattern improves safety and traction for load-bearing vehicles and personnel.

SAFETY PROTOCOL

- Ensure all personnel meet the safety requirements for each individual job site.
- Ensure proper use of Personal Protective Equipment: hard hat, steel-toed boots, safety vest, gloves, and protective eye wear.
- Establish communication protocols for the crew.
- Always be aware of the location and movement of personnel and equipment, including other contractors who may be working at the site.
- Locate overhead powerlines and other potential obstructions and hazards for personnel and equipment.

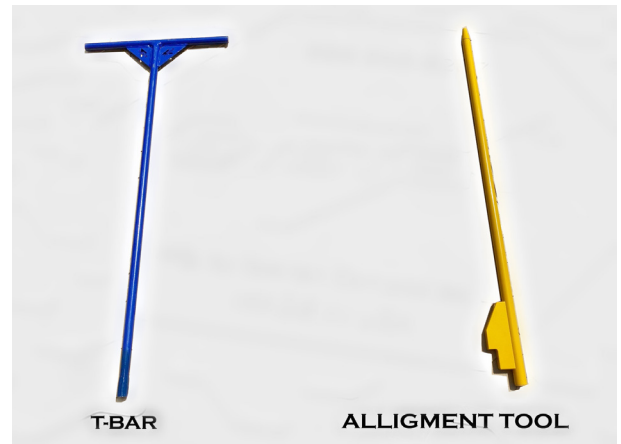
EQUIPMENT AND TOOLS



Ideally, use a 3 to 3.4 cubic yard wheel loader fitted with 5' or 6' forks to offload and stage the mats. A telehandler may also be used.



For tight spaces, a skid steer can be used to place the mats.



T-BAR

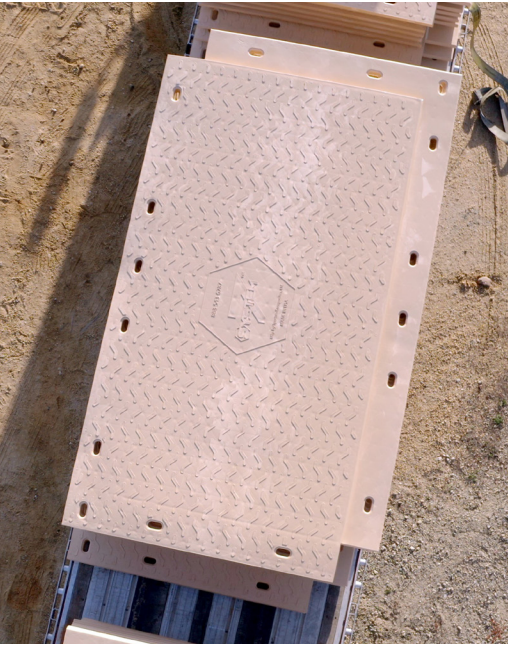
ALIGNMENT TOOL

The alignment tool is used to position and align the mats to allow the pins to fit easily into the pin holes.

The locking tool fits into the top of pin and is used to turn the pin and lock in securely in place.

CREW REQUIREMENTS

A crew size of 4 is recommended for most installations: One crew member to operate the loader and bring the mats to the installation site, one crew member to operate the skid steer and place the mats in the roadway and 2 to guide the mats into place and to install the pins. For large, complex installations, multiple crews may be required for speed and efficiency.



PARTS OF THE MAT

INTERLOCKING FLANGES

Each mat has two overlapping and two underlapping flanges. The underlapping flange is also referred to as the leading edge. These flanges let the mats overlap and interlock. Once interlocked, mats can better disperse weight by sharing the payload with neighboring mats.

The interlocking feature creates a smooth surface and mitigates shifting and hopping when driving over the mats.

LOCKING PINS

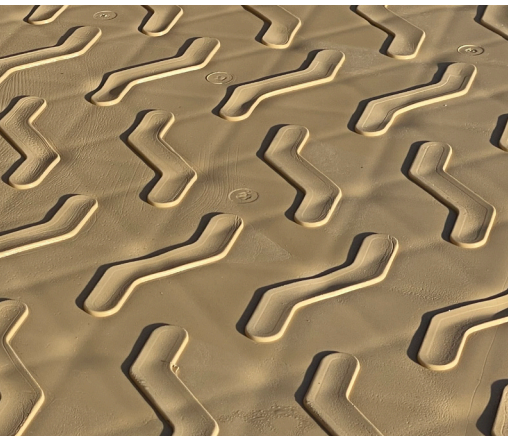
Locking pins join mats together to distribute weight over a large surface area. The mats are equipped with many pin hole options to accommodate various site conditions and configurations. Roadway configurations require 3 pins be used on each end of the mat. Typically, that would be one pin on the left and right side of the mat's leading edge, and one pin in the center hole.

For staging sites and work platforms, 5 pins should be used. Five pins let you connect the mats on both the forward leading-edge flange, and the side flange, to build a square.

It is critical that pins are installed in the locked position to ensure they won't slip or drift under load.

TREAD PATTERN

Mats have a light tread pattern on their work surface. This helps mitigate slipping and shifting for equipment and personnel.





SITE SURVEY AND PROJECT OBJECTIVES

Ground conditions, bearing capacity of the subgrade, load and traffic requirements as well as project duration will impact the configuration of your mat road and work platforms. Consult with our experienced matting specialists to prepare for challenges and requirements for your project.

STAGING THE MATS

Using the wheel loader, transport the stacks of mats to the installation site.

Mats weigh 1100 pounds, so the number of mats that can be transported in one load depends on the size of the equipment. With a 3 cubic foot loader and 6' forks, 5 to 6 mats can be transported at a time. Angle forks at an upward angle, once mats are on forks, to secure during transit.

Stack the mats within proximity to the installation site.





MAT INSTALLATION

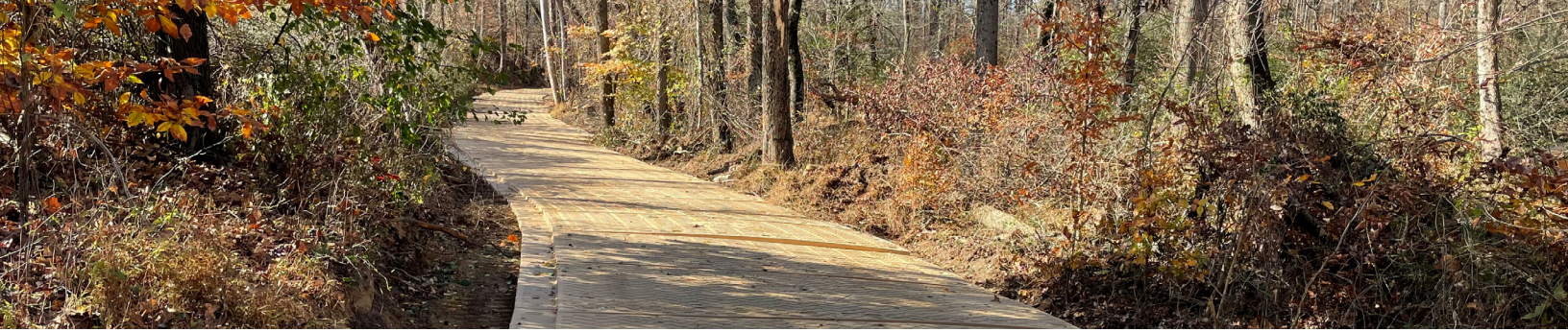
Using the skid steer, install the pre-staged mat piles, one mat at a time. If just a single wheel loader is available, the same wheel loader would both stage mat piles, and install the mats.

The underlapping flange, which is the leading edge, should always be at the North end of the forks. In other words, the bottom tongue of the mat is always out in front while you install.

Ensure the pins, alignment and locking tools are in close proximity to the mat being installed. When the mat is set into place, a team member should pass the alignment tool through the pin holes and guide the overlapping flange onto the bottom mats' underlapping flange.

Pins are inserted into the holes. A quarter turn with the locking T-bar tool locks the pin into place.





To accommodate curved paths, the mats can be slightly offset. For more acute turns, the mats may be left unlocked at the turning point. A new section of interlocking mats is started at your new angle. Although they will not interlock, you should overlap the first mat of this new angled section, one on top of the last mat of previous section.

In extremely soft or wet ground conditions, take care not to drive onto mats that have not been securely locked.

ROADWAY INSTALLATION

Single Width Road: For a single-width, 13" wide temporary roadway, install the mats lengthwise with the long side in the direction of the road. The leading edge, or underlapping flange should be out in front of the road being built. For a double-width road, work right to left laying two rows of mats end-to-end in a straight line.





ADDITIONAL SAFETY PRECAUTIONS

- Composite mats are designed to be used on a sub-grade or underlying surface and not for bridging or spanning gaps.
- The mats have a deflection of about one foot and can handle undulation and irregularities in the ground. However, large obstacles should be removed or avoided.
- Sand can be used for additional traction on wet mats or mats that have become slick with mud and ice. In extremely snowy conditions, a snowplow or shovel can be used to clear the mats. Take care that the plow blade does not scrape the surface of the mat.
- The mats are designed not to absorb water, oil, or other contaminants. Contaminants should be isolated and contained on the mats for remediation. Mats can be steam or pressure washed to restore optimal traction and maintain a clean and safe worksite.
- Replace damaged pins to ensure the mats are securely locked and will remain in place throughout the duration of your project.

STACKING AND STORING

The storage surface and area as well as the equipment capabilities will determine the optimal height of the stack.

Clear obstructions to ensure the storage area is level and stable beneath the stack.

QUESTIONS AND COMMENTS

For more details or for specific answers to questions about your application and site conditions, please contact us at 817-441-1235 to speak with a matting specialist.

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