



MonoSET 100 HD

MonoSET 100 HD is a three-part urethane cement Heavy Duty trowel applied flooring system. MonoSET 100 HD is trowel applied at 1/2" to 5/8" inch thickness. It can also be used for patching. For best results apply over MonoSET 100 TC.

Suggested Tools:

1. 5 Gallon Metal Mix Container
2. 12" Paint Stick or Spatula
3. High-Speed Drill 1000-1500 rpm
4. 5" Jiffler Mixer
5. 4"x12" steel finishing trowel
6. Duct tape
7. 18" Loop Roller
8. Spiked Shoes
9. Timer

10. Personal Protection Equipment:

- i. Long Sleeved Shirt
- ii. Long Pants
- iii. Work Boots
- iv. Safety Hat (if needed)
- v. Latex Gloves or similar
- vi. Dust Mask (3M N95)
- vii. Safety Goggles

Surface Preparation:

The substrate must be sound, solid, profiled and free of materials or contaminants that may act as bond breakers. CSP 5 is recommended. If substrate is contaminated, detergent scrub and rinse with clean water to remove surface dirt, oil, grease and any other contaminants.

For more information see: Surface Preparation Guidelines for MonoSET.

General:

Planning: Proper planning is essential to ensure a seamless appearance of the finished floor. Joint lines will show in the finished floor. Lay out installation in sections. Allow full width of area to be completed in 15 minutes or less to assure no placement lines.

Edge Details: Keyway all free edges, doorways, wall perimeter, expansion joints, columns, drains, equipment pads and termination to other floor systems. Keyways are recommended to control shrinkage and transition to other floor systems. A keyway of about 1/4" wide by a 1/2" deep is acceptable (2:1 ratio keyway).

Slope and Pitch: Pre-sloped floors pitched up to 1/2" per foot only.

For smaller areas: an additional stone or 1/4" pea gravel can be added to the mixture to prevent slumping to help complete pitching and finish in one step.

For larger areas: pitching, sloping or repair may be completed by using polymer modified concrete.

Note: Pea gravel may also be added if the system to be installed is at greater than 1/2". This will avoid excessive heating that may lead to blisters and cracks.



Crack Repair and Joint Repair: On moving cracks, use a flexible joint caulk for cracks up to 1/4" X 1/4" without further bulking.

Large Crack Repair and Patching: MonoSET 100 HD can be applied over cracks up to 1/4" x 1/4" without further bulking. For larger cracks or deeper holes, prime the holes area with MonoSET 100 TC. While the primer is still wet or slightly tacky, patch the holes with MonoSET 100 HD. It should contain additional sand or pea gravel if the holes are deep. Allow patched area to harden before installing the floor area with MonoSET 100 HD.

Mixing Instruction:

Make sure the installation area is 50-90°F. The material temperature should be at room temperature (72°F). **Important: A stop watch is required during mixing.**

Select a convenient mix area. Protect the surface by covering the selected mix area with a layer of cardboard and/or a sheet of plastic. Make sure there is enough space to move around. The more comfortably your mixer works, the less likely you are to have a “mix error.”

Do not mix this product in direct sunlight or when temperatures exceed 90°F. Higher temperatures will greatly reduce the working time of this product. Make sure all necessary tools; mix and measure containers are ready. DO NOT MIX UNTIL READY FOR IMMEDIATE USE.

IMPORTANT! Mix only what can be applied in 15 minutes.

MonoSET 100 HD comes in pre-measured units consisting: A component (resin), B component (hardener), and C component (aggregate). All 3 components must be thoroughly mixed.

Mixing: A 5-gallon metal pail is needed. Shake part A thoroughly before opening. Pour part A into the 5 gallon pail. Make sure the entire content of the resin component is completely drained. Mix part A, resin, before adding the Part B, hardener. Add part B. Be sure to get all the material, including any material clinging to the wall of the packaging, into the mixing vessel. Using a forced circulation pail mixer, thoroughly mix A and B components for **30 seconds**. Gradually add aggregate and mix for **2 minutes** until a homogenous mix is attained (be sure to scrape the sides). Move the blade around to assure the mixture is completely mixed and uniform. **THOROUGH BLENDING IS MANDATORY.** A properly mixed batch is easy to trowel and spread. It will yield a uniform surface appearance. Incomplete mixing will cause an inconsistent finish or possible blistering.

Important: If clumps cannot be mixed in or are difficult to mix, STOP and examine the bag of aggregate for visible clumps or the presence of moisture.

CAUTION! Mix only what can be applied in 10 to 15 minutes. Do not attempt to rework the materials after it begins to set. Watch your temperature for ideal working time. Incomplete mixing will cause an inconsistent finish or possible blistering. Replace mix bucket every 10 batches or have multiple mixing buckets ready. Multiple batches are recommended to reduce mix time and keep a wet edge. Clean mixing paddle and pail regularly to avoid mixing fresh material with older materials. This will further reduce irregular curing and/or blisters.



Application:

Apply material immediately after mixing. Pour the entire mixed batch on the floor in a ribbon and trowel spread to desired thickness. A screed box is recommended when possible to help deliver materials to floor evenly, especially over a large open install area.

Finishing:

Use a 4”X12” finish steel trowel. Apply sufficient pressure on trowel at an angle of approximately 60°. Level and spread the materials evenly as much as possible to desired thickness. Make sure the thickness is correct before finishing. Use sweeping motions to ensure the material is fully closed, smoothed, leveled and finished. Improper trowelling and finishing will result in a void where pinholes and blowholes can occur. Do not use alcohol or solvent directly on the finished surface but periodically clean your trowel with solvent to reduce sticky troweling. The troweled materials will follow the contour of the concrete substrate. Shining a bright light behind the applicator can reveal trowel marks. Avoid over troweling as this results in gloss variations, creates voids and reduce slip resistance.

After finishing with a trowel, lightly roll the surface with a loop roller to eliminate trowel marks and bring liquids to the surface for proper sealing. Wipe down the loop roller periodically to reduce introduction of curing material to newly applied areas.

Textured Surfaces:

For maximum slip resistance in wet areas broadcast #46, #24 or #16 Aluminum Oxide into the wet resin. An aluminum oxide or quartz/sand may be broadcast into the wet resin for enhanced slip or skid resistance. Broadcast at 1/10 lb. per square foot (psf). Excessive rollback over broadcasted aggregate may lead to reduction of slip resistance.

	Spread Rate	System Thickness
finishing trowel	20 sq. ft. per unit	½” thick
finishing trowel	20 sq. ft. per unit	5/8” Thick: quartz broadcast and topcoat

Important: Clean trowel frequently with solvent to prevent material build up. Please make sure the trowel is dry before using. Check for ½” or 5/8” thickness frequently.

NOTE: Keep moisture from coming into contact during installation and curing. Water may alter surface appearance. Avoid installing where there is puddling or pooling of water or where drips are nearby, especially during curing. All plumbing or other leaks must be stopped or diverted prior to commencing work.



Allow the material installed to fully cure. A minimum of 8 hours at 75°F is needed for light foot traffic. It's possible that 24 hours may be required at 50°F. Additional cure time is needed for areas of heavy-load traffic, such as where fork lifts and other heavy machinery are moved around.

Chemical Resistance:

Refer to chemical chart.

Color:

Refer to color chart.

Packaging:

Sold in kits as follows:

- Part A: 5-lb resin
- Part B: 5-lb curative
- Part C: 45-lb aggregate

Storage:

All components in the kit must be stored dry between 50°F–90°F. Do not allow resin and hardener to freeze.

Resin and hardener each have a shelf life of 1 year.

Aggregate has a shelf life of 6 months.

All components must be in their original sealed containers.

Limitations:

Do not use a broken, damaged or wet bag of aggregate.

Do not split substrate or add to the kits unless you are using inert materials, such as pea gravel or sands for extending purposes.

Bleaching and staining is possible in pigmented system due to certain chemicals. This will not affect the performance.

This product is not light stable. Sunlight and metal halide lighting will cause yellowing. This will not affect the performance.

A batch-to-batch color variation may occur. Box the same lot numbers together for color consistency.

Do not apply to unreinforced sand/cement screeds, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, aluminum, polyesters or elastomeric membranes.

Old, damaged, clumpy bags of aggregate may affect flow, leveling and healing properties.

CAUTION: Do not remove any materials from premeasured unit.



Safety Precautions:

Have proper personal protective equipment (PPE).

Read safety data sheet completely and thoroughly.

Follow and observe all manufacturers', local, state and federal regulations and safety hazards warnings, procedures and guidelines.

Use only as directed. KEEP OUT OF REACH OF CHILDREN.

Disposal:

Dispose of all excess materials, packaging and other waste in accordance with federal, state and local regulations.

Surface Engineered Technologies (SET) warrants its products to be free of defects in materials and workmanship. Since SET has no control over surface preparation or application methods, no guarantees concerning results is offered, expressed, or implied. If this product is found to be defective, liability shall be limited to the refund of purchase price or replacement of product.



Surface Engineered Technologies

www.SetMaterials.com

Surface Engineered Technologies – Fresno, CA

(800) 323-7246