



TECHNICAL BULLETIN #123

Regarding: Merkrete Sound Shield Acoustical Underlay installation guidelines.

General Overview:

Sound Shield® 7000 acoustic sheets are engineered not only to provide high performance sound reduction transmission through sub floor assemblies but are also compatible with glues and mortars in achieving a better bonded floor system in floor applications requiring mortars and glues. Merkrete proprietary Symar® process embeds and fuses a poly fiber woven scrim into Sound Shield® 7000, greatly enhancing bonding and anchoring of mortars and glues in installations of ceramics, porcelains, stones, engineered wood, laminates, hardwoods, vinyl and carpet. Sound Shield® 7000 mats have been used in projects all over North America and the Caribbean.

Job Site Conditions

The structure where Sound Shield® 7000 acoustic sheet is to be installed should be enclosed with all outside doors and windows in place, and maintain a minimum average temperature no less than 10° C (50°F). All concrete, masonry, framing members, drywall, paint and other “wet” work should be thoroughly cured and dry. When possible, delay installation of base molding until flooring installation is complete. Sound Shield® 7000 sheets may mark walls if edges of panels are struck against walls. Use care when moving panels around the job site.

Surface Inspection and Preparation

Surfaces must be clean, free of dust, oil, grease, coatings, wax, paint, tar, curing agents, primers, sealers, flooring adhesives, gypsum-based products or any deleterious substance and debris which may inhibit bond.. Surfaces must also be exempt of acids, concentrated alkali or chemical cleaning agents. Surfaces must be mechanically sanded, scarified or shot blasted to completely remove all paint, loosely bonded toppings, loose particles and construction debris. Do not install where hydrostatic conditions exist.

Surface must be structurally sound. Any contaminants shall be removed prior to application. Dusty or dry concrete surfaces should be washed with clean water just prior to commencing work (no standing water). Surfaces should be left clean to allow for a good bond. Patching, leveling or areas requiring a mortar bed must be prepared using Mer-Krete underlayments.

Sound Shield® 7000 Installation Procedures

NOTE: The successful installation of Sound Shield® 7000 acoustic underlay depends on the capacity of the mortar to fully embed itself into the fused poly fiber woven scrim which is used to cover both sides of the Sound Shield® 7000 sheet. The polyester woven scrim greatly enhances the bonding/anchoring capacity of thin set mortars and glues. Proper and full mortar transfer (90 to 95%) to the Sound Shield® 7000 acoustic underlay is imperative for a successful, void free tile installation.

Prior to installing the Sound Shield® 7000 acoustic sheets, cut a 2” perimeter strip of Sound Shield® 7000 underlay and temporarily install with masking tape around the base perimeter of the walls and any protrusions. Do not overlap edges of the strips when joining them together. The strip will be later trimmed to the height of the new finished floor. The perimeter strips help prevent impact noise transmission between the floor and wall. See diagram.

Next, place and dry fit the Sound Shield® 7000 sheets, trim to size as needed, leave a ¼” gap around any protrusions.

While any of the Merkrete modified thinset mortars will perform in the Sound Shield 7000 installation, we recommend Merkrete 801 Thin Set mortar system. Merkrete 801 Self Curing thinset was formulated for 801 as a quick setting mortar designed to cure without the need for normal evaporation. It is recommended for use in the thin-set installation method for vitreous tiles like

porcelain over low or non-absorptive subfloors, and membranes. 801 Self Curing-Thin-Set quick setting mortar allows the tile contractor to grout the tile in less than 2 hours, allowing the tile installation open to foot traffic in 4-6 hours. Using a slow speed mixer, mix selected thin set mortar as per manufacturer's instructions. (Details at <http://www.merkrete.com>)

Using the flat side of a ¼" x ¼" square notch trowel apply a pressure bond-coat directly to the substrate. Immediately apply additional mortar using the notched side of the trowel. Only apply enough mortar so as it can be covered with the Sound Shield® 7000 sheet within 15 minutes. Do not allow mortar to skin over. If mortar has skinned over, completely remove any skinned mortar and re-apply fresh mortar. While the mortar is still fresh lay in the Sound Shield® 7000 acoustic sheets over the fresh mortar. Place one edge of Sound Shield® 7000 sheet on the floor and roll down into the thin set (roll perpendicular to the troweled ridges of the thin set). Move the mat back and forth perpendicular to the thin set ridges. Leave a 1/4" gap around perimeter room walls or any protrusions and fill level with a Merkrete approved acoustical caulking material. Immediately roll underlay so as to embed the underlay into the mortar using a 75 lb. roller. Place next sheet and make sure to make contact with edges of previous sheet. Do not overlap the edges of the Sound Shield® 7000 sheets. If any thin set extends out between the edges of the sheet, either scrape off the excess or take the flat edge of a trowel and strike down the thin set flat with the sheet. Continue this process until the entire area has been covered.

Protect the freshly installed underlay from foot traffic for a minimum of 24 hours.

Using the flat side of a notched trowel, apply a pressure bond coat to the Sound Shield® 7000 sheet. Immediately apply additional mortar using the notched side of the trowel.

Note: notch size to be determined by tile installer so as to achieve 90 to 95% mortar coverage to the back of the tile. Do not apply more mortar than can be covered within 15 minutes. Ensure to press tile firmly with a back and forth motion into mortar so as to help achieve optimal contact of mortar to the back of the tile. See note above. Continue in this fashion until installation is complete.

Allow tile installation to cure for a minimum of 24 hours before grouting. Grout tile following Merkrete ColorGrout installation instructions.

Cut the sound isolation perimeter strip to the height of the new finished floor. Please note, when installing baseboards to the wall, raise baseboards 1/8" above the finished floor. Then fill gap with a flexible acoustical caulking.

Installer/Owner Responsibility

Installer assumes all responsibility for final inspection of product quality. Inspection of the acoustic underlay should be done during the installation. Carefully examine underlay before permanently installing it. If material is not acceptable, do not install it and contact seller immediately. Prior to the installation of any acoustic underlay or flooring product, the installer must determine that the job-site environment and sub-surfaces involved meet or exceed all applicable standards and recommendations of the construction and material industries. The manufacturer declines any responsibility for job failure resulting from, or associated with, sub-surface or job-site environment deficiencies.

When Sound Shield® 7000 is ordered, 5% should be added to the actual square footage needed for cutting allowance.

The installation of ceramic tile must be done following installation standards published in the current (TCA) Tile Council of America handbook, ANSI (American National Standards) 108 specification and our data sheets.

Visit our website at www.merkrete.com or call the Technical Department at 1-(800) 226-2424 for additional information or to request Product Data sheets on Sound Shield 7000 or 801 Thinset.

NOTE: Due to the recycled tire content in Sound Shield 7000 acoustic underlay, an initial odor of rubber will be present while the panels are exposed. Left exposed this odor will dissipate within a few days. Once covered with your hard surface floor covering no odor will be detectable. Emissions from Sound Shield 7000 are not harmful.