

Dal-Sound Sheet Membrane

Installation Instructions

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1. GENERAL INFORMATION

Use Dal-Sound as an acoustical treatment under hard surface flooring including ceramic tile, dimension stone, epoxy terrazzo, hardwood floors, etc. to reduce airborne and impact sound transmission. In a thin-bed method, the sheet with bonding agent is typically 1/8" (3mm) or less. The sheet may also be incorporated into a full mortar bed installation without bonding to the substrate.

NOTES:

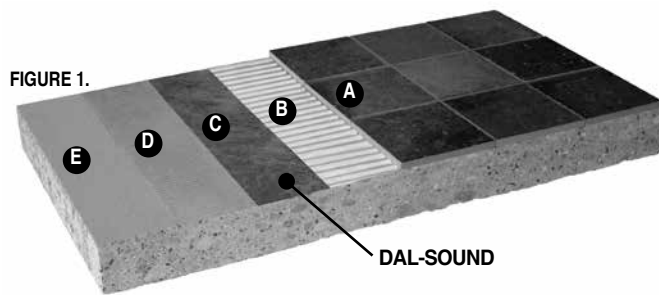
a) Install in strict compliance with these instructions, and comply with all applicable ANSI standards, TCNA recommendations, and building codes.

b) For any procedure not covered by these instructions, contact Dal-Tile Corporation.

STANDARD:	ANSI A118.13	ANSI A118.10	ANSI A118.12	ASTM C627	ASTM E2179	ASTM E492
Description:	Bonded Sound Reduction Membrane for Thin-Set Ceramic Tile Installation	Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations	Crack Isolation Standard: "System Crack Resistance" (Jig Test)	Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems using the Robinson Type Floor Tester	Testing method for the laboratory measurement of the effectiveness of floor coverings in reducing impact noise from a standard tapping machine through concrete floors	Impact Insulation Class (IIC)
Rating:	Passed	Passed	High Performance (> 1/8")	Extra Heavy	Δ12	62**

Note: Refer to Dal-Sound Product Description for additional information.

** Concrete substrate and sound rated ceiling.



- A. Ceramic, terrazzo tile, or dimension stone
- B. Thin-set bond coat appropriate for application
- C. Dal-Sound Membrane
- D. Sheet bond coat
- E. Substrate: Concrete, plywood, backer board (BB), primed gypsum underlayment, and radiant heat systems*

*Dal-Sound R-Value = 0.8

2. MATERIALS

2.1 MEMBRANE: Dal-Sound is a thin 3/64" (1.25mm) bonded, load bearing sheet membrane for sound isolation.

2.1.a COMPOSITION: Dal-Sound is a composite sheet made from an alloy of Chlorinated Polyethylene (CPE) with non-woven fabric laminated to both sides.

2.2 BOND COAT: Dal-Sound should be bonded with NobleBond EXT, Dal-Bond 21, or a modified thin-set mortar (including rapid curing types) which meet ANSI A118.4 and is recommended by the manufacturer for this application. If Dal-Sound is bonded to plywood with thin-set, the thin-set must meet ANSI A118.11. Bonding agent must conform to the appropriate ANSI standards, TCNA Handbook recommendations, and bonding agent manufacturer's directions.

NOTES:

a) Job-site mortar mixes must conform to ANSI A108.5.

b) Refer to bond coat manufacturer's instructions for cure time.

2.3 ACOUSTICAL SEALANT: Use to isolate flooring surface from building elements at perimeters and penetrations.

2.4 TOOLS: Normal tile setting tools, scissors or utility knife, rubber hand roller, and linoleum roller (75 - 100 lbs. recommended). Application of Acoustical Sealant or Dal-Sealant 150 (waterproofing applications) requires a commercial grade caulk gun.

3. PLANNING & LAYOUT

3.1 MEMBRANE: Install Dal-Sound over the entire area to be tiled. For areas wider than one sheet width, butt sheets of Dal-Sound together.

NOTE: Waterproofing requires a 2" overlap of sheet membrane (refer to Section 6.2).

3.1.a SHEET DIMENSION: 6' x 33 1/3' = 200 sq. ft. (1.8m x 10.2 = 18.6m²)

3.2 SHEET BOND COAT

3.2.a NOBLEBOND EXT is a wet-set adhesive suitable for bonding Dal sheet membranes in interior, exterior, wet areas, and vertical and horizontal applications. Porosity and condition of the substrate can affect coverage, but NobleBond EXT will generally provide the following coverage: approximately 90-100 sq. ft./gallon.

3.2.b DAL-BOND 21 is a latex-based, pressure-sensitive adhesive for bonding Dal sheet membranes in interior, horizontal applications. It is not for use in wet areas. Coverage is approximately 150 sq. ft./gallon.

NOTES:

a) Environmental conditions and condition of the substrate can affect coverage.

b) NobleBond and Dal-Bond adhesives allow for greater movement than cement-based mortars. They also allow tile to be installed immediately after sheet is embedded into the adhesive as they do not require further curing. Refer to Installation Instructions on container label.

3.2.c MODIFIED THIN-SET: See manufacturer's coverage rate.

3.2.c.1 Cold Weather Procedure: Consult bond coat manufacturer for safe low-temperature limits and cure times.

3.2.c.2 Hot Weather Procedure: Consult bond coat manufacturer for safe high-temperature limits and mixing procedures.

3.3 ACOUSTICAL SEALANT: A 29 oz. tube of Acoustical Sealant seals approximately 40 lin. ft. when a 3/8" bead is used, or approximately 89 lin. ft. when a 1/4" bead is used.

3.4 DAL-SEALANT 150 (Waterproofing Only): A 10.3 oz. tube of Dal-Sealant 150 seams approximately 40 linear ft.

4. PREPARATION

>>> **RECOMMENDED:** Test materials and method under job-site conditions to confirm suitability.

4.1 INSPECTION: Substrate must meet requirements set forth by the TCNA and ANSI A108 and A118 standards. Report in writing any deficiencies that might affect performance of the system.

NOTES:

a) Dal-Sound will not compensate for structural deficiencies in the substrate.

b) Review all detail drawings (see Section 10 - FIGURES/DRAWINGS).

4.2 PROCEDURE: To incorporate Dal-Sound into a thin-bed installation, prepare substrate and select bond coat.

4.3 SUBSTRATES: Substrate condition for sheet is the same as tile (see TCNA guidelines). Slabs on, above, or below grade should be tested for moisture content and pH. Slabs must be flat. Floor preparation (i.e. leveling, patching) should be done prior to installation of sheet.

4.3.a DEPRESSIONS: Floors with depressions may cause sheet to span over these depressions. Remedy by filling the depression prior to installation of sheet. Follow appropriate industry guidelines.

4.4 INSTALLER: Must be familiar with Dal-Tile's current written instructions, TCNA Handbook recommendations, and ANSI A108 and A118 standards. Contractor must be experienced with installation procedures for Dal-Tile products or be instructed by a Dal-Tile representative prior to commencing work.

5. BONDING SHEET TO SUBSTRATE

5.1 INSTALLATION METHODS:

5.1.a BONDED: Directly to substrate.

5.1.b LOOSE-LAID: Under full mortar bed (see TCNA guidelines).

NOTES:

a) There must be sufficient weight to keep the membrane in place.

b) Spot bonding may be necessary to keep the Dal-Sound from moving.

5.2 PREPARATION: Clean and prepare substrate as if thin setting tile without sheet.

5.3 BONDING AGENTS: Bond sheet with any of the following:

5.3.a NOBLEBOND EXT: Refer to NobleBond EXT Installation Instructions.

5.3.b DAL-BOND 21: Refer to Dal-Bond 21 Installation Instructions.

5.3.c MODIFIED THIN-SET MORTAR: Spread thin-set bond coat with a trowel that provides full coverage (i.e. 1/8" to 1/4" "V"-notched trowel). Trowel an area as wide as the sheet and as deep as can be comfortably reached. In order to avoid trapping air under the sheet, trowel mortar in parallel rows across the width or length of the sheet.

NOTES:

- a) Variation in trowel size, angle at which trowel is held, mixing ratio, or any combination thereof may be necessary to achieve maximum contact. Fine notched trowels increase "skinning" rate.
- b) Shading, misting substrate with water, working at night, or any combination of these techniques may help to reduce the effect of high temperatures.
- c) All ridges of bond coat must be parallel to allow air under sheet to escape when embedding.

5.4 LAY SHEET: Unroll sheet continuously into bond coat before it begins to form "skin".

5.5 EMBED SHEET: Embed Dal-Sound into bond coat (flatten all trowel ridges). For horizontal areas, use 75 - 100 lb. roller. Work from center of sheet to edges. Pull roller edge-to-edge in overlapping passes. Start at end of first sheet installed, progressing to area installed last. Use a small hand roller or straight edge to remove air pockets in areas where larger roller will not fit.

5.6 COVERAGE: Complete coverage of substrate and full penetration of bond coat into the fabric is required. Prior to curing, lift sheet and inspect for full contact. If rows or ridges of bonding agent are seen, membrane has not been properly embedded and additional rolling is necessary.

5.7 DRYING: To prevent outer edges from lifting or curling, use weight (i.e., tile, mortar, etc.). After installation, keep sheet clean as necessary to enable tile to bond.

5.8 PROTECTION OF SHEET: If not covered by wearing surface, protect the installed sheet from damage and all foot or vehicular traffic (use mortar skim coat, rugs, plywood, etc.).

6. ADDITIONAL APPLICATIONS

6.1 ISOLATING CRACKS AND CONTROL JOINTS: Refer to current Dal-Seal CIS Installation Instructions.

6.2 WATERPROOFING: Refer to current Dal-Seal TS Installation Instructions.

7. FLOORING INSTALLATION

a) Acoustical joints are required at the perimeter of the floor area being treated and at any penetration of the floor inside of the perimeter or retaining surface.

- 1) Provide 3/8" wide joint at perimeter of room and around any penetration of floor(s). Continue joint from substrate through tile work.
- 2) Fill joint with sound rated sealant. Hard surfaces and/or mortar must not touch walls, sills, conduits, or pipes as this will affect sound control.
- 3) For deeper joints, use compressible backer rod and cover with sound-rated sealant.

b) Do not penetrate Dal-Sound with mechanical fasteners. Penetrations can create flanking noise paths through which impact sound can radiate.

7.1 TILE INSTALLATION: Set tile in accordance with TCNA Handbook recommendations, ANSI A108 standards, and bond coat manufacturer's directions. Complete coverage of fabric by the bond coat is required.

NOTES:

- a) Refer to bond coat manufacturer's instructions for cure time. Allow additional time (approximately 50%) when installed over Dal-Sound.
- b) Rapid-curing type of thin-set mortar may be used with approval of mortar manufacturer.
- c) For wood or VCT applications, contact Dal-Tile Corporation.

7.2 WOOD FLOORING: Installation of wood flooring must follow applicable industry standards and instructions of the manufacturer of the wood floor surface. Wood must be acclimated to the environment in the room in which the wood floor is to be installed.

CAUTION: Wood floors are dynamic and can move vertically and horizontally when subjected to variations in temperature and humidity. If the environment is not controlled, vertical movement of the wood flooring could exceed the shear strength of the Dal-Sound. The potential for vertical movement of the flooring should be assessed prior to installation.

7.3 VINYL FLOORING: Dal-Sound can be used with vinyl and vinyl composition tile (VCT). For installation, follow the instructions using the Bonded method (Section 5.1.a).

NOTES:

- a) The bonding agent used to bond the vinyl to the Dal-Seal sheet membrane must be able to cure between two impervious surfaces.
- b) If the project requires that the Dal-Seal sheet membrane provide waterproofing, refer to Dal-Seal TS Installation Instructions.
- c) Installing Dal-Seal sheet membranes under vinyl flooring may negate performance or durability warranties generally provided by the manufacturer of the flooring. Prior to installing Dal-Seal sheet membranes, consult with the vinyl manufacturer regarding the effect on their warranty. Dal-Tile Corporation does not warranty performance of vinyl flooring installed over Dal-Seal sheet membranes.

8. LIMITATIONS: Dal-Sound is not designed for use as a wearing surface. Dal-Sound is not recommended for exterior applications. For applications not specifically detailed in the installation instructions, contact Dal-Tile Corporation. Wood subfloors must be clean, dry, and free of sealers, primers, and other substances that could affect bonding of the sheet to the subfloor. Dal-Sound will not correct structural deficiencies. Deflection of the subfloor must not exceed industry standards. Installation must follow TCNA recommendations and appropriate industry standards.

9. WARRANTY: Dal-Sound brand CPE membrane is guaranteed for the life of the original installation by Dal-Tile Corporation against failure caused by rotting, cracking, and microorganism deterioration when properly installed in tile systems for which its use is recommended by Dal-Tile Corporation. This warranty is limited to the replacement of defective material and freight charges to destination only. There are no other expressed or implied warranties, and this warranty is in lieu of any other warranty, including, but not limited to, implied warranties of merchantability and fitness for purpose. Dal-Tile Corporation is not responsible for consequential damages. The remedy of the purchaser set forth herein is exclusive.

NOTE: DAL-SOUND MUST BE INSTALLED IN STRICT COMPLIANCE WITH THESE INSTRUCTIONS, APPLICABLE ANSI STANDARDS, TCNA RECOMMENDATIONS, AND BUILDING CODES.

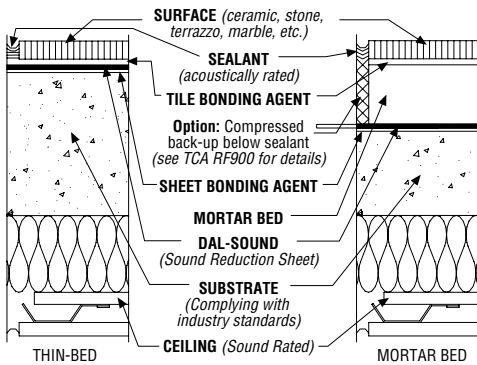
These suggestions and data are based on information Dal-Tile Corporation believes to be reliable. Users should verify by tests that Dal-Sound, as well as these installation methods, are suitable with the products being used in their application. Since specific use, materials, and handling are not controlled by Dal-Tile Corporation, this warranty is limited to the replacement of defective Dal-Tile products. Dal-Tile disclaims any responsibility for (a) warranties of merchantability and fitness for purpose; (b) verbal recommendations of its representatives; and (c) consequential damages.

10. FIGURES/DRAWINGS

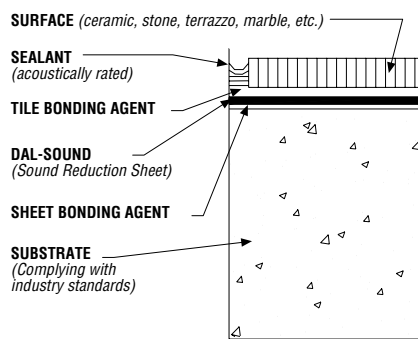
NOTE: Dal-Sound can be installed in a variety of construction configurations including:

- A) Radiant Heating Systems.
- B) Over Primed Gypsum Underlayment.
- C) Under Hardwood Flooring.

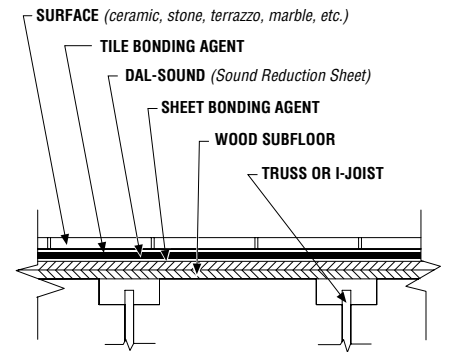
Concrete Substrate with Sound Rated Ceiling



Concrete Substrate



Wood Subfloor



daltile®

