



170.3 and 170.5 Sound & Crack Isolation Mat Frequently Asked Questions

TDS 405

170 Sound & Crack Isolation Mat FAQ Questions Regarding Sound

1. What type of sound does 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat help to control?

170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat reduces impact on a floor from transmitting through to the space below. This sound is classified as Impact Insulation Class (IIC) which is a measurement used to quantify the transmission of impact sound through a floor/ceiling assembly.

2. What IIC Rating is required for many high-rise residential buildings? *

While the minimum value may change from project to project, based on building owner's requirements or building codes, a typical target is ≥ 50 IIC (International Building Code Section 1207.3). The higher the IIC value, the better the sound control performance.

3. Do 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat help to minimize sound travelling through air? *

Airborne sound, or Sound Transmission Class (STC), is controlled mostly by mass of structure. 170 Sound & Crack Isolation Mat, as well as the vast majority of sound control products for tile or stone, contributes no appreciable improvement to isolating airborne sound.

4. How are 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat tested for sound control performance? *

170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat have been tested per ASTM E2179 "Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors", ASTM E989 "Standard Classification for Determination of Impact Insulation Class (IIC)", ASTM E492 "Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine" and other pertinent standards.

5. What exactly is the Δ IIC of 170.3 Sound & Crack Adhesive 170.5 Sound & Crack Adhesive and what does it mean?

The delta IIC (Δ IIC) of 170.3 Sound & Crack Isolation Mat is 16 (Δ IIC = 16) which is the sound control contribution of the 170.3 Sound & Crack Isolation Mat, installation materials and tile or stone. The delta IIC (Δ IIC) of 170.5 Sound & Crack Isolation Mat is 22 (Δ IIC = 22) which is the sound control contribution of the 170.5 Sound & Crack Isolation Mat, installation materials and tile or stone. The rest of the floor/ceiling construction, any acoustical drop ceiling (if present), insulation, and plenum will provide the remaining value to the IIC.

6. Will 170.3 Sound & Crack Isolation Mat provide a Δ IIC of 16 on every project?

Not necessarily. Keep in mind that the Δ IIC of 16 for 170.3 Sound & Crack Adhesive was established in a laboratory using the tile and installation methods required by the ASTM testing standard. The thickness of the setting materials and type and thickness of tile or stone used on a project may have a beneficial or a negative

impact on the final IIC number. Mockup or onsite testing would have to be conducted to determine the final IIC number.

7. Will 170.5 Sound & Crack Isolation Mat provide a Δ IIC of 22 on every project?

Not necessarily. Keep in mind that the Δ IIC of 22 for 170.5 Sound & Crack Adhesive was established in a laboratory using the tile and installation methods required by the ASTM testing standard. The thickness of the setting materials and type and thickness of tile or stone used on a project may have a beneficial or a negative impact on the final IIC number. Mockup or onsite testing would have to be conducted to determine the final IIC number.

8. Does LATICRETE provide independent laboratory test reports for 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat?

Yes. Please contact LATICRETE Technical Services at 1.800.243.4788 x1235 for a copy of the test reports.

General Questions

9. Why do I need a sound control underlayment like 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat?

To prevent the occupants of the space below from hearing sounds made by impacting the floor above (e.g. footsteps, chairs moving, articles dropping, etc...). A sufficient amount of sound control protection can help maintain the peace and maintain/raise property value.

10. Where should 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat be used?

In most cases 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat would be used in multi-family dwellings, especially in high-rise condominium units. In some instances, 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat will be used in office buildings with sensitive areas below. Many municipalities require that a minimum IIC and STC be attained, so it is important to check local building code for minimum requirements.

11. Why should I choose 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat over other sound control products?

- 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat are engineered to provide an excellent Δ IIC when tested with tile as measured by ASTM E2179.
- 170.3 Sound & Crack Isolation Mat is only 3 mm (1/8") thick so only a minimal height is added to the installation system. 170.5 Sound & Crack Isolation Mat is only 5 mm (1/5") thick so only that minimal height is added to the installation system.
- Tile or stone can be directly bonded to 170.3 Sound & Crack Isolation Mat and LATICRETE 170.5 Sound & Crack Isolation Mat.
- Manufactured from 100% recycled tires so it is environmentally friendly. In fact, 170.3 Sound & Crack Isolation Mat and LATICRETE 170.5 Sound & Crack Isolation Mat contain 89.4% recycled content (88.5% post-consumer recycled content and 0.9% pre-consumer recycled content).
- 170.3 Sound & Crack Isolation Mat and LATICRETE 170.5 Sound & Crack Isolation Mat are components of the LATICRETE® 25 Year Tile & Stone System Warranty (DS 025.0), LATICRETE 10 Year Tile & Stone System Warranty (DS 230.10) and the LATICRETE 5 Year Tile & Stone System Warranty (DS 230.05).

12. Does LATICRETE provide a warranty for 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat?

Yes. When used as a component of a complete LATICRETE installation system 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat will fall under the LATICRETE 25 Year Tile & Stone System Warranty ([DS 025.0](#)), LATICRETE 10 Year Tile & Stone System Warranty ([DS 230.10](#)) and the LATICRETE 5 Year Tile & Stone System Warranty ([DS 230.05](#)). For a copy of these warranties please visit

<https://laticrete.com>, contact your local LATICRETE distributor or call LATICRETE Technical Services at 1.800.243.4788 x1235.

13. How are 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat packaged?

170.3 Sound & Crack Isolation Mat is packaged in 4 ft. (1.2 m) wide rolls and 37.5 ft. (11.4 m) long totaling 150 ft² (13.9 m²) and is 3 mm (1/8") thick. 170.5 Sound & Crack Isolation Mat in 4 ft. (1.2 m) wide rolls and 30 ft. (9.14 m) long totaling 100 ft² (9.3 m²) and is 5 mm (1/5") thick.

14. What usage rating do 170.3 Sound & Crack Isolation Mat meet?

170.3 Sound & Crack Isolation Mat is rated "Light" per ASTM C627 "Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester" as tested by the Tile Council of North America (TCNA). A "Light" rating means 170.3 Sound & Crack Isolation Mat can be used in light commercial areas (e.g. office space, reception areas, kitchens, and bathrooms) as well as in residential applications.

15. What usage rating do 170.5 Sound & Crack Isolation Mat meet?

170.5 Sound & Crack Isolation Mat is rated "Moderate" per ASTM C627 "Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester" as tested by the Tile Council of North America (TCNA). A "Moderate" rating means 170.5 Sound & Crack Isolation Mat can be used in commercial and light institutional areas in public space of restaurants and hospitals.

16. Do 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat meet also act as crack isolation membranes?*

Yes. Both 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat isolate cracks up to 1/8" (3mm) and will prevent the cracks from transferring through to the finished floor.

17. Can I install tile directly to the 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat? *

Yes. Use proper installation methods, the appropriate size notched trowel and suitable LATICRETE[®] installation materials for installing the tile or stone. LATICRETE recommends the use of 254 Platinum, 257 TITANIUM[™] or MULTIMAX[™] LITE to install tile over 170.3 Sound & Crack Isolation Mat and 170.5 Sound & Crack Isolation Mat.

18. Can I waterproof a tile or stone installation in which either 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat is installed?

Yes. HYDRO BAN[®] XP, HYDRO BAN or 9235 Waterproofing Membrane must be installed onto the substrate prior to the installation of the 170 Sound & Crack Isolation Mat. The membrane must be allowed to cure for a minimum of 24 hours @ 70°F (21°C) before the 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat can be installed. Note: For temperatures below 70°F (21°C) wait for a minimum of 3 days prior to installing the 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat.

17. What can I use to install 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat?

LATICRETE recommends the use of 254 Platinum, 257 TITANIUM or MULTIMAX LITE to install 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat by using a 1/4" x 1/4" (6 mm x 6 mm) notched trowel. Please see the installation instructions, data sheet ([DS 170.0](#)) or contact LATICRETE Technical Services at 1.800.243.4788 x1235 for more information.

18. Are 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat affected by moisture? *

No. 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat are composed of recycled tire rubber and will not absorb water or be negatively affected by water. However, please note that 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat must not be used in submerged applications.

19. How do I handle saw cut joints and existing cracks in a floor?

All saw cut joints, existing non-structural cracks and other non-moving joints in the floor must be filled and leveled with 254 Platinum, 257 TITANIUM or MULTIMAX LITE. Allow the mortar to harden prior to installation of the 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat. After the installation of the tile or stone, a soft joint must be installed in the tile or stone at the approximate location of the existing, filled joint in the floor.

20. Do I have to overlap 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat to get continuous sound control over large areas?

No. When 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat must meet it is only necessary to butt the edges together. Make sure that there are no voids in the seams where sound can transmit through.

21. Can 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat be used in conjunction with STRATA_HEAT™? *

Yes. STRATA_HEAT™ can be installed over the top of the 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat. The proper sequence of materials is (from the top down) – tile/stone, thin-set mortar, electrical mat installed in thin-set mortar, 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat, thin-set mortar, substrate.

22. Does 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat provide any insulation value for STRATA_HEAT?

No. 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat both have an R value of only about 0.1 so it will not be effective as an insulator for radiant heat systems.

23. Will 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat off-gas? *

No. 170.3 Sound & Crack Isolation Mat or 170.5 Sound & Crack Isolation Mat do not off-gas. They both meet the U.S. Environmental Protection Act and State of Washington criteria for Indoor Air Quality when tested as an exposed surface. [170.3 Sound & Crack Isolation Mat](#) or [170.5 Sound & Crack Isolation Mat](#) also have UL GreenGuard Gold certification proving compliance with the strict UL GreenGuard requirements for low VOC emissions.

* Please refer to [DS 170.0](#) for more information on 170.3 Sound & Crack Isolation Mat or [DS 35615](#) for more information on 170.5 Sound & Crack Isolation Mat.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at <https://laticrete.com>
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LATICRETE INTERNATIONAL, INC. ▪ 1 LATICRETE Park North ▪ Bethany, CT 06524-3423 USA
800.243.4788 ▪ support@laticrete.com ▪ www.laticrete.com

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