



SUNROCK[®] ACOUSTIC INSULATION

Where
Energy Saving
Matters



SUNROCK[®]
Insulating the World

Thermocare Rock wool (I) Pvt. Ltd.

SUNROCK[®] ACOUSTIC INSULATION BOARD

Our hearing range is between 20 and 20,000 Hz, and it's most sensitive to sounds in the 1000 Hz range. Sound insulation can help improve our comfort and even our health.

Airborne Sound

Airborne sounds are noises that move through the air. Vehicles honking, radios, conversations, or dogs barking are examples of airborne noises.

Impact Sound

Impact sounds are noises caused by something striking something else. For example, a toy or glass falling on the floor or people walking on a hardwood floor are impact sounds.

Flanking Noise

Flanking noises are sounds that travel through, under or over a sound barrier. They are the most difficult to control as they take an indirect path. Sound waves can travel through ductwork, over or under the best soundproof wall, and through hollow core doors. Sound can even transfer through back to back electrical boxes!

Understanding STC and STC Ratings

STC (Sound Transmission Class) is a method of comparing how well windows, doors, floors, walls and ceilings are at reducing sound transmission. It measures the decibel (dB) decrease as sound passes through or is absorbed or blocked by material or wall.

Recommended STCs for Your Home

A quiet home has an STC 40 rating. The International Building Code (IBC) recommends a rating of STC 50 for walls, ceilings, and floors as a minimum requirement. An increase to STC 55 or STC 60 would be better.

For residential locations, an STC 52 for bedrooms and STC 56 for bathrooms, living rooms and kitchens, are recommended minimums. A 2x4 wall with 1/2" of drywall on both sides, but no insulation, has an STC 33 rating.

NRC (Noise Reduction Coefficient)

The Noise Reduction Coefficient (NRC) measures the amount of sound a material absorbs or reflects on a scale of 0 to 1. No sound is being absorbed or reflected at 0, and all sound is absorbed or reflected at 1.

- A typical interior 2x4 wall with 1/2" of drywall on both sides has a rating of STC 34.
- A typical interior 2x4 wall with 1/2" of drywall on both sides has a rating of STC 34.
- Adding sound rated insulation can improve that to STC 45.
- Building the same wall using 2-1/2" metal studs with 1/2" drywall on each side you get an STC of 34; add same sound rated insulation can bring the rating to STC 47.
- Using 5/8" drywall instead of 1/2" on the steel studs brings the sound insulated wall up to STC 49.~

Mineral Wool Soundproofing Insulation

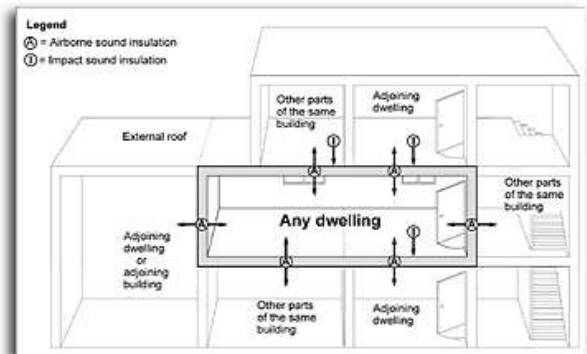
High Performance StoneWool

High performance stonewool is lightweight insulation with improved thermal and acoustic properties. It is manufactured from a mix of Stonewool from molten rock and slag. It has improved sound damping and absorption properties. The fibers make it more fire, moisture, water, and rot resistant.

With sound absorbing ratings of 95% and NRC of 1.05, high performance stonewool provides improved sound reducing values. Much lighter in weight provides equitably with twice the density of multi-purpose mineral wool.

SUNROCK ACOUSTIC INSULATION BOARD (AIB) is rigid board made for use in ceilings and floors, as well as walls. It not only provides a thermal barrier, but also improves sound absorption, and impact vibration and noise.

SUNROCK is made from STONEWOOL spun from molten basaltic and igneous rock. They can be easily cut and even shaped.



SUNROCK AIB 1050 - ASTM C423

SUNROCK AIB 1050 can easily fit into wall framing cavities or can be framed. It works well to trap mid and upper range frequencies, and is effective with low range too. It can even be used to make acoustic base traps. The heavier density of the 1050 helps it reduce echo or slap back noise within a room.

THICKNESS	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
2"	0.32	0.81	1.06	1.02	0.99	1.04	0.95
3"	0.78	0.89	1.04	0.98	1.01	1.02	1.00
DIMENSIONS	1000MM X 500MM						



SUNROCK AIB 1350 - ASTM C423

SUNROCK AIB 1350 have an NRC of 0.9, so are great for sound proofing. Mid to upper range frequency is excellent NRC 0.9 or better, and a respectable low range coefficient, make the SUNROCK AIB a top choice to absorb or reduce sound transfer. They can be used inside walls, ceilings or floors, or as independent framed panels hung where needed to deal with echo and feedback.

THICKNESS	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
2"	0.43	0.78	0.90	0.97	0.97	1	0.90
3"	0.75	0.82	0.89	0.94	1	1	0.90
DIMENSIONS	1000MM X 500MM						



SUNROCK AIB 7050 - ASTM C423

SUNROCK AIB 7050 is a lighter weight product. The AIB 7050 has mid and high range frequency ratings of NRC 1.05 to 1.09 and can be used inside walls, ceilings, and floors or as framed panels. It is more flexible (less rigid) than the above products, so can be used to wrap as well.

THICKNESS	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
2"	0.63	0.95	1.14	1.01	1.03	1.04	1.05
3"	1.03	1.07	1.12	1.04	1.07	1.08	1.10
DIMENSIONS	1000MM X 500MM						

Stonewool vs Fiberglass Insulation

- ➔ Stonewool insulation (3.5" thick) have an STC of 45 and an NRC of 1.05, are more rigid and have a higher R-value/inch of thickness. It is water, mold, and mildew resistant too.
- ➔ Fiberglass (3.5" thick) slab have an STC of 39 and an NRC of 0.85, they are not rigid and tend to compress and slump, reducing their noise absorption abilities.

High performance stonewool is light weight insulation with improved thermal and acoustic properties. It is manufactured from a mix of stonewool from molten rock and slag. It has improved sound damping and absorption properties. The fibers make it more fire, moisture, water, and rot resistant.

FIRE PERFORMANCE

According to BS476 (Part 7)

CLASS I

- No propagation of flames when the surface is entertained by fire.

(According to EN 13501 – 1)

EUROCLASS A 1 s0 d0

- According to ASTM E 84/UL723

CLASS A

- Flame Spread Index 0
- Smoke Developed index 0

WATER REPELLENCY

- According to BS 2972 absorbs less than 1%
- According to ASTM C 1104 C 612 & is 8183 absorbs less than 1%

HEAD OFFICE :

Prabhu Kutir, Ramadhin Marg,
RAJNANDGAON - 491441 (Chhattisgarh) - INDIA
P : +91 7744-404919, 409419, 222777, +91 7744 409410.
E : info@thermocareindia.com
W : www.thermocareindia.com

FACTORY :

Village – Nathunavagaon
Rajnandgaon - 491441
(Chhattisgarh)
INDIA

OUR PRESENCE

Hyderabad

M : 093907 27279, 093967 27279
E : hyderabad@thermocareindia.com

Pune & Mumbai

M: 093701 27279
E : pune@thermocareindia.com

Ahmedabad

M : 093755 27279
E : gujarat@thermocareindia.com

Delhi

M: 093101 27279
E : delhi@thermocareindia.com

Chennai

M: 093818 27279
E : chennai@thermocareindia.com

Bengaluru

M: 093967 27279
E : bangalore@thermocareindia.com



*We all have a responsibility....
to work together towards a better tomorrow,
towards peace and conserving energy*