

Hushboard™ Sound Deadening Board



When you want to build quieter,
more enjoyable and private living spaces,
sound conditioning —
the reduction of distracting or irritating noises —
is the answer.



Georgia-Pacific Hushboard™ Sound Deadening Board

Sound Solutions for Residential, Multifamily and Commercial Construction

Hushboard® Sound Deadening Panels

are a specially manufactured, non-structural fiberboard product designed for use in wall systems to reduce sound transmission through walls. With the increasing popularity of theater rooms, bonus rooms and home offices, Hushboard is an inexpensive and easy way to reduce sound transmission in any room.



How Hushboard works

Lightweight, low-density panels of Hushboard trap certain frequencies of noise passing through walls, from room to room or from exterior to interior. Hushboard panels combined with 1/2" or 5/8" gypsum board reduces or traps different frequency sounds. The gypsum acts to reduce transmission of lower frequency noise while the Hushboard panel reduces transmission of higher frequency noise.

Hushboard is lightweight easy to install, and is ideal for use in new construction, both residential and commercial, or for remodeling projects.

G-P Hushboard is a wood fiberboard sound dampening and thermal insulation panel that can add thermal insulation value and help dampen sound transmission when used in wall and floor/ceiling assemblies of residential and light commercial buildings. Contact your building official regarding use in fire resistance rated assemblies. There is a generic 1 hour fire resistance rated wall assembly (Gypsum Association File No. WP3330), however, there are no specific fire rated assemblies containing G-P Hushboard. G-P nominal 1/2" thick 4' x 8' Hushboard has a thermal conductivity (K-Value) of 0.350 and a thermal resistance (R- Value) of 1.43.

HUSHBOARD ACOUSTICAL TEST RESULTS

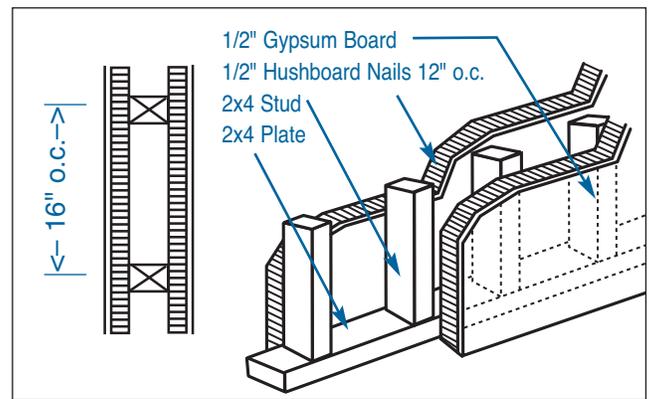
1/3 OCTAVE CENTER CENTER FREQUENCY (HZ)	ABSORPTION COEFFICIENT	TOTAL ABSORPTION IN SABINS	% OF UNCERTAINTY WITH 95% CONFIDENCE LIMIT WITH SPECIMEN
100	0.09	6.45	2.97
125	0.13	9.06	2.52
160	0.12	8.56	2.02
200	0.15	10.75	1.57
250	0.21	15.00	1.32
315	0.26	19.08	1.14
400	0.30	21.88	1.07
500	0.37	26.86	0.98
630	0.37	26.43	1.00
800	0.33	23.53	0.70
1000	0.30	21.41	0.59
1250	0.29	20.98	0.58
1600	0.31	22.44	0.54
2000	0.29	20.95	0.52
2500	0.29	21.17	0.50
3150	0.31	22.27	0.46
4000	0.34	24.64	0.47
5000	0.38	27.39	0.50

NRC = 0.30

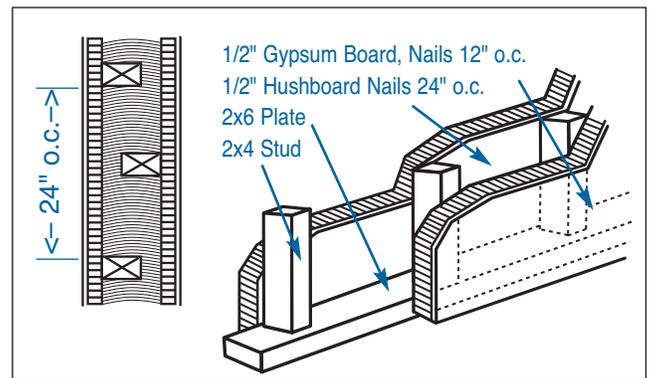
Tips for Better Sound Control

- Use constructions that have been tested and found to have good resistance to sound transmission.
- Pay close attention to details. Careless workmanship can significantly reduce the sound insulating value of a construction.
- Placement of electrical switches, outlets or heating and air conditioning vents are important. They should be located so they do not oppose each other on each side of a common wall. Sound also leaks through air gaps or openings such as loosely fitted doors, back-to-back electrical boxes, medicine cabinets and enlarged holes around pipes. Even tiny cracks transmit a surprising amount of sound energy.
- Avoid flanking paths that allow sound to travel around sound-insulated constructions. Sound may travel through contiguous windows, doorways, halls and stairways.
- While insulation is essential for thermal control, it is just part of the overall strategy. A 2' x 4' partition wall with fiberglass insulation and 1/2" drywall on both sides has an STC rating of only approximately 38. To construct a very good, quiet wall, it is necessary to separate the two surfaces, increase the wall mass and block sound paths by which it travels from one wall to the other. Separation of walls can be obtained by two lines of 2' x 4' studs on a common 2' x 6' sole plate with the studs staggered so they do not line up across from each other. A better, slightly more costly procedure is to use a double wall, with each having its own sole plate.
- Avoid inconsistencies, such as an acoustically poor door in an acoustically good partition. The poor elements of construction tend to cancel out the benefits of the good partition.

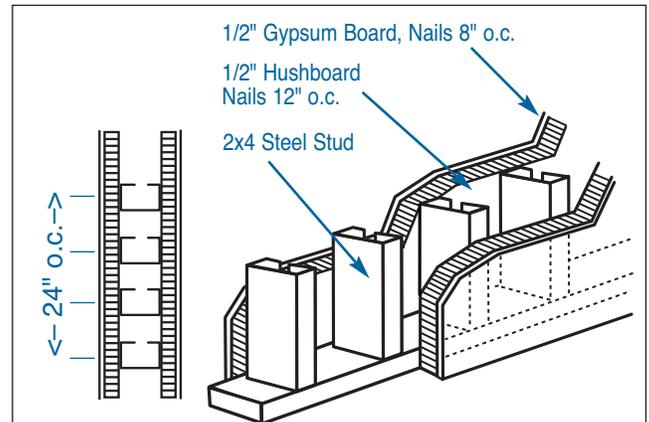
Wood Stud Wall (STC) 39*



Staggered Stud Wall (STC) 56*



Steel Stud Wall (STC) 49*



What is a Sound Transmission Classification (STC)?

Sound transmission classification is an overall rating of the amount of transmission loss through a wall assembly (roof or floor) composed of two or more products, through a frequency range from 100 Herz to 5000 Herz (the normal range for hearing).

STC numbers are used by acoustical engineers as a measure of resistance of a building element (such as a wall, ceiling or floor assembly) to the passage of sound. The higher the STC number, the better the resistance to sound transmission through the wall, roof or floor. Since one product may reduce sound more effectively at certain frequencies than another product, a combination of products coupled with air space usually will produce the greatest sound attenuation.

An STC rating of 50 is generally considered good, while a rating of 55 or higher is considered excellent.

*Tests conducted by Riverbank Acoustical Laboratories

Installation Instructions

Walls – G-P Hushboard panels can be vertical applied directly to wood or steel framing spaced 16" o.c. All panel edges must be over framing or blocking. Allow a 1/16" gap between panel edges at panel joints and 1/8" around wall openings and at the top and bottom of the wall for expansion. Fasten with 5d coated roofing nails (wood studs) or minimum 1-1/2" bugle head, coated, drywall screws (type W for wood or Type S for steel) 12" o.c. at panel edges and intermediate supports. Fasten 1/2" in from panel edges and drive flush with the Hushboard surface. If installed to both sides of interior partitions, stagger vertical joints in the Hushboard on the opposite sides by at least two supports. Hushboard is not to be used as an exposed wall finish but, should be covered with drywall for fire protection and any other wall finish. Stagger joints in the drywall from vertical joints in the Hushboard. Also, avoid wall penetrations for plumbing, electrical, etc. through the wall on both sides into the same framing bay as this can increase the likelihood of flanking of sound. Seal the perimeter joints of the wall and around any penetrations with dense acoustical mastic to gasket the openings and joints against flanking of sound.

Floors* – Subfloor should be minimum 19/32" plywood or OSB Sturd-I-Floor installed perpendicular to floor framing spaced a maximum 19.2" o.c. Subfloor edges perpendicular to floor joists should be tongue and groove or supported by blocking. Apply Hushboard panels over the dry subfloor after walls and partitions are in place, (Hushboard should not be run under walls or partitions due to the compressibility of the fiberboard). Hushboard can be fastened to the subfloor using 5d coated roofing nails or bugle headed, coated, type W drywall screws spaced in a 12" o.c. grid and 1/2" from panel edges. Drive fasteners flush with the Hushboard surface. Stagger joints between Hushboard at least 6" from joints in the subfloor. Cover the Hushboard with a minimum 15/32" plywood underlayment fastened through the Hushboard and into the subfloor. Fasteners should just penetrate the back of the subfloor. Run the underlayment panels perpendicular to the Hushboard and offset joints at least 6" from joints in the Hushboard.

Hushboard panels can also be laid "free floating" perpendicular to subfloor panels and overlaid with 1" x 4" lumber "sleepers" parallel and over the floor joists spaced 16" o.c. Fasten the "sleepers" to the joists with a single 8d coated nail spaced 16" apart. Install a minimum 19/32" plywood tongue and groove underlayment perpendicular to the sleepers and fasten with a 4d coated ringshank underlayment nail. In either floor installation method, the ceiling side of the floor/ceiling assembly should have minimum 1/2" drywall applied to the joists.

Ceilings – Sound dampening can be enhanced by attaching the ceiling drywall over 1/2" Hushboard perpendicular to joists and adding fiberglass or mineral wool cavity insulation. Fasten as previously described for walls and seal the perimeter of the floor/ceiling assembly and around any penetrations with dense acoustical mastic to prevent flanking of sound.

*Use of Hushboard on floors is unsupported by acoustical tests and is only recommended on light duty residential floors. Use furniture protectors under legs of heavy furniture to disperse concentrated loads.



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