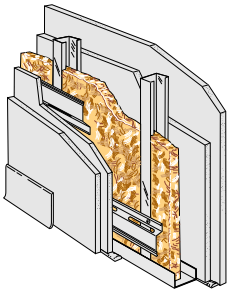
Sound & Fire Tests

The following are typical assemblies containing THERMAFIBER Sound Attenuation Fire Blankets (SAFBs). Each has been tested for acoustical performance and each has a fire rating or estimated fire rating. The Sound Transmission Class (STC), Impact Insulation Class (IIC), Ceiling Attenuation Class (CAC) and Field Sound Transmission Class (FSTC) are listed first and assemblies of each type are listed in order with highest sound performance first. UL design or other fire test or sound test information are identified at the end of the assembly description. A wide variety of systems are shown to provide choices in performance and cost. For additional fire- and sound-rated wall and ceiling assemblies utilizing THERMAFIBER Sound Attenuation Fire Blankets, contact Thermafiber, Inc.

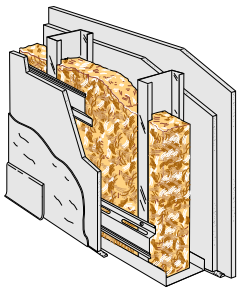
For further information about any of the assemblies listed here, consult your Thermafiber sales representative, or visit us online at www.thermafiber.com.

Sound and Fire-Rated SAFB Assemblies

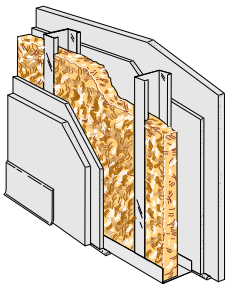
Steel Stud Partitions (Non-Load-Bearing)



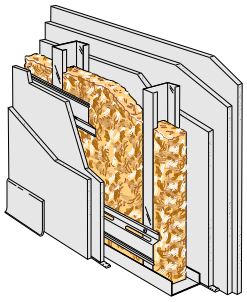
61 STC*
2-hr. partition, double-layer, resilient channel—minimum 1" THERMAFIBER SAFB in stud cavity—5/8" gypsum wallboard Type C core—2-1/2" 25 ga steel studs 24" o.c.—RC-1™ channel or equivalent one side, spaced 24" o.c. screw-att to studs—2 layers gypsum panels screw-att to channels, 2 layers screw-att to steel studs—joints stag and fin—perimeter caulked—**UL Des U454—RAL-TL-83-214**



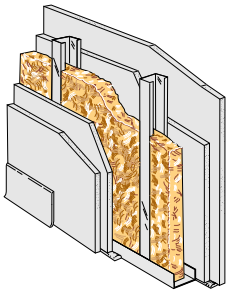
58 STC*
1-1/2-hr. unbalanced partition, resilient channel 3" THERMAFIBER SAFB in stud cavity—1/2" gypsum wallboard Type C core—3-5/8" 20 ga studs 24" o.c.—RC-1 channels or equivalent one side spaced 24" o.c. screw-att to studs—2 layers gypsum panels screw-att to studs, 1 layer screw-att to channels —joints stag and fin—perimeter caulked—**UL U452—RAL-TL-83-215**



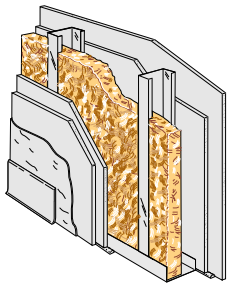
55 - 59 STC
1-hr. partition—Base layer 1/4" gypsum wallboard applied parallel to each side of 2-1/2" steel studs 24" o.c. with 1" Type S drywall screws 12" o.c. —Face layer 5/8" Type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/16" Type S drywall screws 12" o.c.—Joints staggered 24" each layer and side. Sound tested with 1-1/2" mineral fiber insulation, 3.0 pcf, friction fit in stud space—**GA WP-1015**



61 STC*
3-hr. partition, double-layer, resilient channel—3" THERMAFIBER SAFB in stud cavity—1/2" gypsum wallboard Type C core—3-5/8" 20 ga studs 24" o.c.—RC-1 channel or equivalent one side, spaced 24" o.c. screw-att to studs—3 layers gypsum panels screw-att to studs, double layer screw-att to chan—joints stag and fin—perimeter caulked—**UL Des U419 or U455—RAL-TL-87-153**

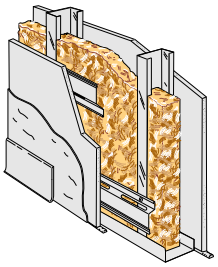


56 STC
4-hr. partition, double-layer—2" THERMAFIBER SAFB in stud cavity—2 layers 3/4" SHEETROCK Brand gypsum panels, ULTRACODE® core, ea side—2-1/2" 25 ga steel studs 24" o.c.—panels screw att with joints stag and fin—**UL Des U419, U490-ULC W441 or SA-910907**



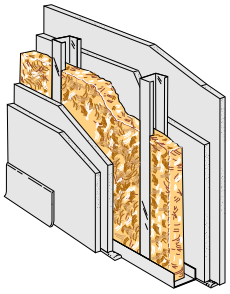
55 STC*
2-hr. partition, double-layer—1-1/2" THERMAFIBER SAFB in stud cavity—2 layers 1/2" gypsum wallboard Type C core, ea side—3-5/8" 25 ga steel studs 24" o.c.—joints staggered—base layer screw att—face layer strip lamin or screw att—joints fin—perimeter caulked—**UL Des U412 or U419-ULC W406—SA-800421**

***STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C



54 STC*

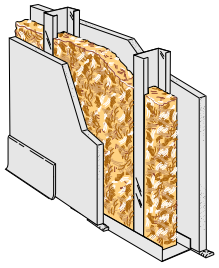
1-hr. partition, single-layer, resilient channel—3″ THERMAFIBER SAFB in stud cavity—5/8″ gypsum wallboard Type C core—3-5/8″ 20 ga steel studs 24″ o.c.—RC-1 chan or equivalent one side spaced 24″o.c. screw-att to studs—gypsum panels screw-att to studs & RC-1 channels—joints stag and fin—perimeter caulked—**UL Des U419 or U451** rating also applies with IMPERIAL Brand gypsum base, FIRECODE C core, and veneer finish surface—**RAL-TL-83-216**



50 - 54 FSTC

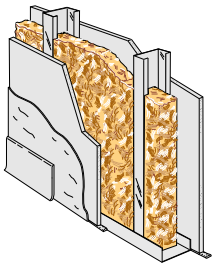
2-hr. partition—Base layer 1/2" Type X gypsum wallboard or gypsum veneer base applied parallel to each side of 1-5/8" steel studs 24" o.c. with 1" Type S drywall screws 12" o.c.—Face layer 1/2" Type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/8" Type S drywall screws 12" o.c.—Joints staggered 24" each layer and side. Sound tested with 1-1/2" mineral fiber insulation friction fit in stud space—**GA WP-1530**

Note: Can be used as a non-load bearing area separation wall—**GA ASW-1100**



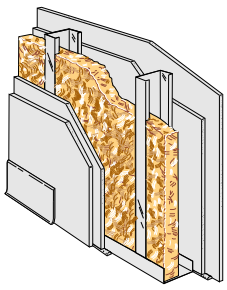
50 STC

2-hr. partition, single-layer—3″ THERMAFIBER SAFB in stud cavity—3/4″ SHEETROCK Brand gypsum Panels, ULTRACODE core, ea side—min. 3-1/2″ 25 ga steel studs 24″ o.c.—panels screw att—joints stag & fin—perimeter caulked—**UL Des U419, U491 or ULC W440—USG-910617**



51 STC**

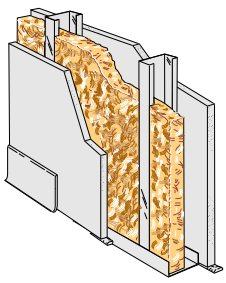
1-hr. partition, single-layer, Creased—3" Creased THERMAFIBER SAFB in stud cavity—5/8" gypsum wallboard Type X—3-5/8" 25 ga steel studs 24" o.c.—panels screw att—joints stag & fin—perimeter caulked—**UL Des U419 or U465—RAL-TL-90-166—SA-860620**



50 - 54 STC

2-hr. partition—Base layer 1/2" Type X gypsum wallboard or gypsum veneer base applied parallel to each side of 2-1/2" steel studs 24" o.c. with 1" Type S drywall screws 24" o.c.—Face layer 1/2" Type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/8" Type S drywall screws 12" o.c.—Joints staggered 24" each layer and side. Sound tested with 1-1/2" mineral fiber insulation friction fit in stud space—**GA WP-1545**

Note: Can be used as a non-load bearing area separation wall—**GA ASW-1105**

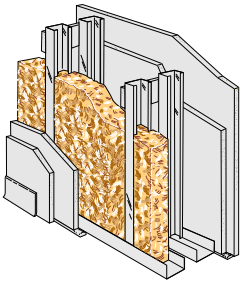


45 - 49 STC

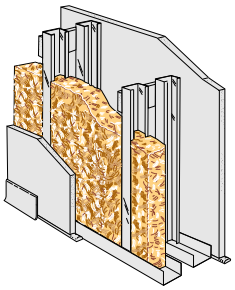
1-hr. partition—One layer 1/2" Type X gypsum wallboard or gypsum veneer base applied parallel to each side of 2-1/2" steel studs 24" o.c. with 1" Type S drywall screws 8" o.c. at vertical joints and 12" o.c. at intermediate studs. 2" mineral fiber insulation, 2.5 pcf, friction fit in stud space—Joints staggered 24" on opposite sides—**GA WP-1070**

***STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C
****STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE®

Steel Stud Chase Walls (Non-Load Bearing)

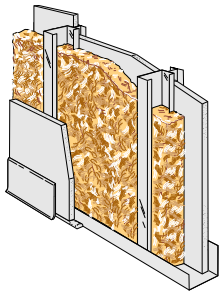


57 STC**
2-hr. partition, double-layer chase wall—3-1/2" THERMAFIBER SAFB on one side in stud cavity—2 layers 5/8" gypsum wallboard Type X ,ea side—1-5/8" 25 ga steel studs 24" o.c. in 2 rows spaced 6-1/4" apart—5/8" gypsum panel gussets or steel run braces spanning chase screw-att to studs—panels appl screw att—joints stag & fin—**UL Des U420—TL-76-156**

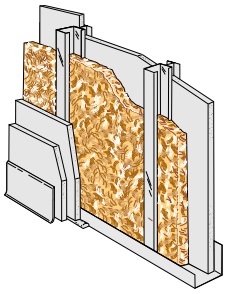


52 STC**
1-hr. partition, single-layer chase wall—3-1/2" THERMAFIBER SAFB on one side in stud cavity—5/8" gypsum wallboard Type X, ea side—1-5/8" 25 ga steel studs 24" o.c. in 2 rows spaced 6-1/4" apart—5/8" gypsum panel gussets or steel run braces spanning chase screw-att to studs—panels screw att—joints stag & fin—**UL Des U420—TL-76-155**

Shaft Wall Systems (Non-Load Bearing)

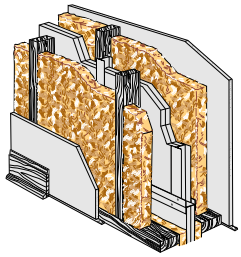


52 STC***
2-hr. shaft wall partition—3" THERMAFIBER SAFB in stud cavity—1" gypsum wallboard liner panels, set between 4" steel C-H studs 24" o.c. one side—3/4" SHEETROCK Brand gypsum panels, ULTRACODE Core, other side—panels screw att—joints stag & fin—perimeter caulked—**UL Des U415 or U492, ULC W508—SA-910913**



47 STC* and *****
2-hr. shaft wall partition—1" THERMAFIBER SAFB in stud cavity—2 layers 1/2" gypsum wallboard Type C core, one side—1" gypsum wallboard liner panels set between 25 ga. steel C-H studs 24" o.c.—joints fin—**UL Des U415 or U438—BBN-750706**

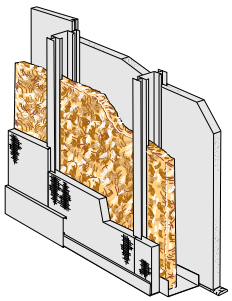
Area Separation Walls (Non-Load Bearing)



60 STC***
2-hr. area separation wall partition—3" THERMAFIBER SAFB on both sides in stud cavities—1/2" gypsum wallboard—two 1" gypsum wallboard liner panels set between one-piece steel H studs 24" o.c.—2 x 4 wood studs 16" o.c. each side on 2 x 4 plates min. 3/4" from liner panels—gypsum panels att with 1-1/4" Type W screws 12" o.c.—joints stag & fin—perimeter caulked—**UL Des U336—TL-88-350**

For more area separation wall designs see page 6:
GA WP-1530 (ref: GA ASW-1100)
GA WP-1545 (ref: GA ASW-1105)

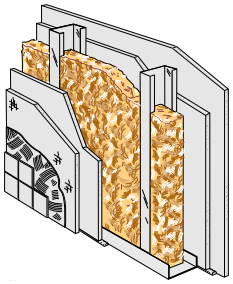
Demountable Partitions (Non-Load Bearing)



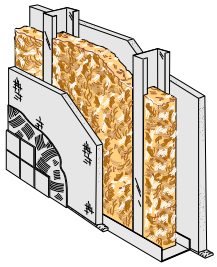
47 STC
1-hr. demountable partition (ULTRAWALL® Partition)—1" THERMAFIBER SAFB in stud cavity—concealed "H" studs 24" or 30" o.c.—3/4" x 24" or 30" bevel edge ULTRAWALL® gypsum panels—joints unfin—perim gaskets—based on 24" panels—**U of C 8-18-67**—based on 30" panels—**U of C 7-23-69—BBN-701216**

*STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C
**STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE®
***STC values are based on SHEETROCK® Brand gypsum liner panels

Cement Board Partitions (Non-Load Bearing)

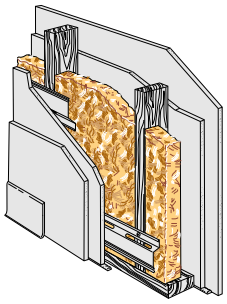


56 STC* and ****
2-hr. partition—double-layer—3″ THERMAFIBER SAFB in stud cavity—2 layer—1/2″ Cemetitious Backer Board (cement board) and 1/4″ ceramic tile—base layer 1/2″ gypsum wallboard Type C core one side—2 layers 1/2″ gypsum wallboard Type C core other side—3-5/8″ 25 ga steel studs 16″ o.c.—cement board att with 1-5/8″ Type S-12 corrosion resistant wafer-head steel screws—joints taped—**UL Des U443—SA-851016**

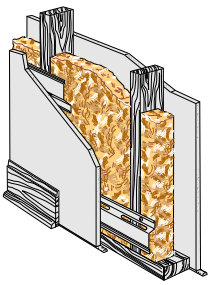


50 STC* and ****
1-hr. partition—single-layer—3" THERMAFIBER SAFB in stud cavity—1/2" Cemetitious Backer Board (cement board) and 1/4" ceramic tile one side—5/8" gypsum wallboard Type C, one side—3-5/8" 20 ga steel studs 16″ o.c.—cement board att with 1-1/4″ Type S-12 corrosion resistant wafer-head steel screws—joint taped—**UL Des U442, ULC W419 or W423—SA-840313**

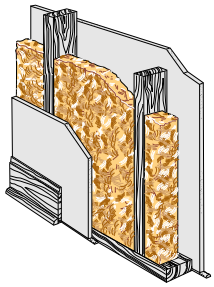
Wood Stud Partitions (Load Bearing)



59 STC*
2-hr. partition—double-layer, resilient channel—2″ THERMAFIBER SAFB in stud cavity—2 layers 5/8″ gypsum wallboard Type C core, each side—2 x 4 16″ o.c.—RC-1 channel or equivalent one side, spaced 24″ o.c.—resilient side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—resilient layers perimeter caulked—joints fin—**UL Des U334—TL-67-239**

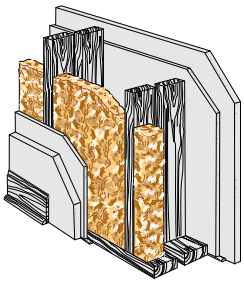


50 STC*
1-hr. partition—single-layer, resilient channel—3″ THERMAFIBER SAFB in stud cavity—5/8″ gypsum wallboard Type C core—2 x 4 16″ or 24″ o.c.—RC-1 channel or equivalent one side, spaced 24″ o.c.—panels app horiz & att to channels—end joints back-blocked with RC-1 channel with 1″ TYPE S screws—opp side direct att with 1-1/4″ Type W screws—joints fin—perimeter caulked—**UL Des U311 and ULC U311—BBN-760903**

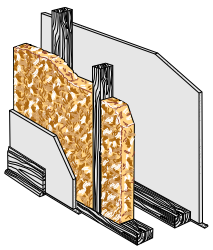


46 STC**
1-hr. partition—single-layer—3″ THERMAFIBER SAFB in stud cavity—5/8″ gypsum wallboard Type X, or gypsum wallboard, water-resistant, Type X—2 x 4 24″ o.c.—panels nailed 7″ o.c.—1-7/8″ cem ctd nails—joints exp or fin—perim caulked—**UL Des U305 and UL Des U314—BBN-700725**

Double Wood Stud Chase Wall



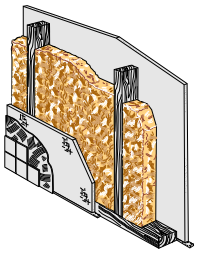
55 - 59 STC
1-hr. partition—Base layer 1/4" gypsum wallboard applied parallel to each side of double row of 2 x 4 wood studs 16" o.c. on separate plates spaced 1-1/2" apart with 4d coated nails, 1-1/2" long, 0.099" shank, 1/4" heads, 12" o.c. Joints staggered 16" on opposite sides.—Face layer 1/2" Type X plain or predecorated gypsum wallboard or gypsum veneer base applied parallel to each side with 3/8" beads of adhesive 16" o.c. and 5d coated nails, 1-3/4" long, 0.099" shank, 1/4" heads, 16" o.c. at top and bottom plates. 4d finish nails, 1-1/2" long, 0.072" shank, 0.1055" heads, driven at a 45° angle 16" o.c. horizontally and 24" o.c. vertically. Joints offset 24" from base layer joints.—Sound tested with 1-1/2" mineral fiber insulation in stud space. Horizontal bracing required at mid height. (Load-Bearing)—**WP 5510**



54 STC**
1-hr. chase wall partition—single-layer—3″ THERMAFIBER SAFB on one side in stud cavity—5/8″ gypsum wallboard Type X—2 x 3 non-load-bearing studs 16″ o.c.—2 x 3 plates 1″ apart—panels screwed or nailed 7″ o.c.—joints fin—perim caulked—est. fire rating based on **UL Des U305 and UL Des U340**—**TL-77-149** (Non-load bearing)

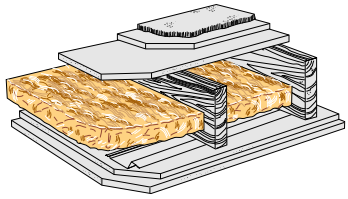
*STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C
**STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE®
****STC values are based on DUROCK® Brand cement board panels

Cement Board/Wood Stud Partitions (Load Bearing)

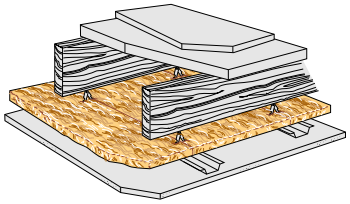


40 STC* and ****
1-hr. partition—single-layer—3-1/2" THERMAFIBER SAFB in stud cavity—1/2" Cemetitious Backer Board (cement board) and 1/4" ceramic tile one side—2 x 4 studs 16" o.c.—board att with 1-5/8" TYPE S-12 corrosion resistant wafer-head steel screws or 1-1/2" hot-dipped galv nails 8" o.c.—5/8" gypsum wallboard Type C core other side—joints taped—**UL Des U329—USG-840314**

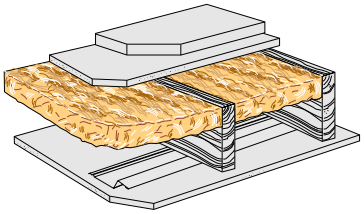
Wood Joist Ceiling Systems (Unrestrained Assemblies)



59 STC/69 IIC*
2-hr. ceiling—double-layer—3" THERMAFIBER SAFB—floor of carpet/pad, 1-1/2" flooring, 1/2" plywood—2 x 10 wd joists 16" o.c.—ceiling of 2 layers 5/8" gypsum wallboard Type C core, over RC-1 channels or equivalent 16" o.c.—**UL Des L541—RAL-TL-90-40/RAL-IN-90-5**

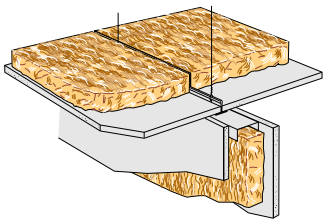


47 STC/40 IIC*
1-hr. ceiling—single-layer—1" FIRESPAN 90 laid over furring channels below joists—1/2" gypsum wallboard Type C core, ceiling— 3/4" T&G plywd—I-shaped wd joist 24" o.c.—met fur chan 24" o.c. clip-att to joist—panels screw att to chan 12" o.c.—joints fin—**UL Des L530** based on TJI® joists—**TL-81-87—IN-81-16**



51 STC/46 IIC*
1-hr. ceiling—single-layer, resilient channel—3″ THERMAFIBER SAFB between joists—1/2″ gypsum wallboard Type C core—1-1/4″ nom wd sub & fin flr—2 x 10 wd joist 16″ o.c.—RC-1 channel or equivalent att to joists—panels att with 1″ TYPE S screws—joints fin—est fire rating based on—**UL Des L514—CK-6512-9**

Mineral Fiber Overlay on Acoustical Ceiling System



48 CAC
Class A ceiling—3" THERMAFIBER SAFB laid over ceiling, extending 4' each side of partition—AURATONE® 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—contin over partn—**ASTM E84—Sound test USG-820406**

***STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C
******STC values are based on DUROCK® Brand cement board panels