## Sound and Fire-Rated SAFB Assemblies

### Steel Stud Partitions (Non-Load-Bearing)

<table>
<thead>
<tr>
<th>61 STC*</th>
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<td>2-hr. partition, double-layer, resilient channel—minimum 1&quot; THERMAFIBER SAFB in stud cavity—5/8&quot; gypsum wallboard Type C core—2-1/2&quot; 25 ga steel studs 24&quot; o.c.—RC-1&quot; channel or equivalent one side, spaced 24&quot; 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</td>
<td>3-hr. partition, double-layer, resilient channel—3&quot; THERMAFIBER SAFB in stud cavity—1/2&quot; gypsum wallboard Type C core—3-5/8&quot; 20 ga studs 24&quot; o.c.—RC-1 channel or equivalent one side, spaced 24&quot; o.c. screw-att to studs—3 layers gypsum panels screw-att to studs, double layer screw-att to channel—joints stag and fin—perimeter caulked—UL Des U419 or U455—RAL-TL-87-153</td>
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<th>58 STC*</th>
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<td>1-1/2-hr. unbalanced partition, resilient channel 3&quot; THERMAFIBER SAFB in stud cavity—1/2&quot; gypsum wallboard Type C core—3-5/8&quot; 20 ga studs 24&quot; o.c.—RC-1 channels or equivalent one side spaced 24&quot; o.c. screw-att to studs, 1 layer screw-att to channels—joints stag and fin—perimeter caulked—UL U452—RAL-TL-83-215</td>
<td>4-hr. partition, double-layer—2&quot; THERMAFIBER SAFB in stud cavity—2 layers 3/4&quot; SHEETROCK Brand gypsum panels, ULTRA CODE® core, ea side—2-1/2&quot; 25 ga steel studs 24&quot; o.c.—panels screw att with joints stag and fin—UL Des U419, U490-ULC W441 or SA-910907</td>
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<th>55 - 59 STC</th>
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<td>1-hr. partition—Base layer 1/4&quot; gypsum wallboard applied parallel to each side of 2-1/2&quot; steel studs 24&quot; o.c. with 1&quot; Type S drywall screws 12&quot; o.c.—Face layer 5/8&quot; Type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/16&quot; Type S drywall screws 12&quot; o.c.—Joints staggered 24&quot; each layer and side. Sound tested with 1-1/2&quot; mineral fiber insulation, 3.0 pcf, friction fit in stud space—GA WP-1015</td>
<td>2-hr. partition, double-layer—1-1/2&quot; THERMAFIBER SAFB in stud cavity—2 layers 1/2&quot; gypsum wallboard Type C core, ea side—3-5/8&quot; 25 ga steel studs 24&quot; 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</td>
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*STC values are based on SHEETROCK® Brand gypsum panels, FIRECODE® C
Steel Stud Partitions (Non-Load-Bearing) continued

54 STC*
1-hr. partition, single-layer, resilient channel—
3" Thermawall 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 liewox. 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" Thermawall 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, U451 or ULC W440—USG-910617

51 STC**
1-hr. partition, single-layer—3" Creased Thermawall 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"
Thermarber 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"
Thermarber 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 span-
ning 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" Thermarber 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" Thermarber 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" Thermarber
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 (Ultawall® Partition)—
1" Thermarber SAFB in stud cavity—concealed "H"
studs 24" or 30" o.c.—3/4" x 24" or 30" bevel edge
Ultawall® gypsum panels—joints unfi n—perm
gages—based on 24" panels—U of G 8-18-67—
based on 30" panels—U of G 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 layers 5/8" 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 1-1/2" Type S-12 corrosion resistant washer-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 washer-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 U331 and ULC U311—BBN-760903

54 STC**
1-hr. chase wall partition—single-layer—3" THERMAFIBER SAFB on one side 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—perm caulked—UL Des U305 and ULC 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 1 plain or predrilled 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—perm 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" **HERMAFIBER** SAFB in stud cavity—1/2" Cemsemous Backer Board (cement board) and 1/4" ceramic tile one side—2 x 4 studs 16" o.c.—board att with 1-5/8" T-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"
**HERMAFIBER** 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

51 STC/46 IIC***
1-hr. ceiling—single-layer, resilient channel—3" **HERMAFIBER** 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" T-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" **HERMAFIBER** SAFB laid over ceiling, extending 4' each side of partition—Auratone® 5/8" x 24" x 48" acoust cgr panels in Susp Exp Grid Syst—cont in over partn—ASTM E84—Sound test USG-820406

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

****STC values are based on DUNROCK® Brand cement board panels