

SCP116 UL® H501® Acoustic Ratings

The following section of the **USG Structural Modular Construction Design Manual** named SCP116 contains the acoustic performance values for the noncombustible, floor/ceiling UL® design H501®. The values for the Sound Transmission Class (STC), or airborne sound, as well as the Impact Isolation Class (IIC), or knocking sound, are noted for the H501® bare floor system along with nine (9) different typical floor coverings.

DOCUMENT INSTRUCTIONS

This document is a separate PDF from the launch document SCP110 and is always accessible with an internet connection and a web browser. It is not recommended that this section be saved, as it is anticipated that SCP116 will be updated and expanded frequently.

The indexes found here summarize the tested values, listing the floor coverings along the top of the tables and the design numbers down the left side. The values in the indexes are the STC/IIC values for the floor coverings in question. Down the right-hand side of the index is a quick summary of the floor/ceiling construction identifying the sound material, if any, the type of underlayment and the drywall construction of the ceiling below.

Once an STC/IIC value has been chosen, simply click on the design number in the left-most column to be taken to the design page, where details of the floor/ceiling construction are explained. At the bottom of each design page is a red outline box labelled "Return to INDEX" to allow the viewer to get back to the main acoustic index.

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

TECHNICAL SERVICE

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WEBSITE

usg.com/structural

MANUFACTURED BY

United States Gypsum Company
550 West Adams Street
Chicago, IL 60661

LEGEND UL® H501® Modular

USG DESIGN NUMBER The acoustic file number for the tested system in question. Any USG Design Number label starting with "ALA" is an estimate generated by USG's proprietary Acoustic Learning Algorithm.

FIRE RATING (HOUR) The UL®-certified hourly floor/ceiling rating

SOUND RATING LEVEL – Three rating groups:

- B – Basic sound performance STC: 51 to 55 and IIC: 51 to 55
- P – Premium sound performance STC: 56 to 60 and IIC: 56 to 60
- D – Deluxe sound performance STC: 61 or higher and IIC: 61 or higher

FLOOR COVERINGS (STC/IIC)

- BARE** – UL® design floor/ceiling assembly without any underlayment, sound mats or floor coverings
- CARPET & PAD** – 0.5" Shaw ECO Beauty carpet with 0.4" Shaw Support PLS7/16
- CARPET ONLY** – 0.5" Shaw ECO Beauty carpet
- SHEET VINYL** – 0.07" Shaw Home Front sheet vinyl
- SHEET VINYL WITH BACKER** – 0.1" Tarkett Moxie™ sheet vinyl with 1mm padded backer
- VCT** – 0.13" Armstrong Standard Excelon® vinyl composition tile
- LVT** – 0.16" Mannington Spacia® luxury vinyl tile
- LAMINATE** – 0.39" Pergo XP® Haley Oak laminate flooring
- 1/2" THICK ENG. WOOD** – 1/2" Vintage Floors wood flooring
- 12"X12" CERAMIC TILE** – 0.31" Daltile ceramic tile

CEILING SUPPORT SYSTEM

Drywall ceilings are supported by 1/2" deep 25 gauge resilient channel. (ClarkDietrich Building Systems RC Deluxe™)

SOUND ISOLATION MATERIAL

- RST03** – PLITEQ GenieMat® RST03
- KIN** – KINETICS® 5/16" Soundmatt
- RST05** – PLITEQ GenieMat® RST05

UNDERLAYMENT

- FRX1** – 1-layer 1/4" USG Fiberock® Brand Underlayment
- FRX2** – 2-layers 1/4" USG Fiberock® Brand Underlayment

CEILING COMPOSITION – Type of drywall used for ceiling construction

- ULIX1** – Single layer of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)
- ULIX2** – Double layer of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)

INDEX UL® H501® Modular

USG DESIGN NUMBER	HOUR	LEVEL	FLOOR COVERING (STC/IIC)											CEILING COMPOSITION			
			BARE	CARPET & PAD	CARPET ONLY	SHEET VINYL	SHEET VINYL WITH BACKER	VCT	LVT	LAMINATE	1/2" THICK ENG. WOOD	12"X12" CERAMIC TILE	SOUND ISOLATION MATERIAL	UNDERLAYMENT			
K4505.01	2	--	57/44												--	--	ULIX 1
K4505.02	2	B		58/73											--	--	ULIX 1
K4505.03	2	B			58/54										--	--	ULIX 1
K4505.04	2	B				58/52									--	FRX1	ULIX 1
K4505.18	2	P				59/57									RST03	FRX2	ULIX 1
K4505.25	2	P				59/57									KIN	FRX2	ULIX 1
K4505.32	2	P				58/58									RST05	FRX2	ULIX 1
K4505.05	2	B					58/54								--	FRX1	ULIX 1
K4505.19	2	P					59/57								RST03	FRX2	ULIX 1
K4505.26	2	P					60/56								KIN	FRX2	ULIX 1
K4505.33	2	P					58/58								RST05	FRX2	ULIX 1
K4505.06	2	B						59/52							--	FRX1	ULIX 1
K4505.20	2	P						60/58							RST03	FRX2	ULIX 1
K4505.27	2	P						61/57							KIN	FRX2	ULIX 1
K4505.34	2	P						59/59							RST05	FRX2	ULIX1
K4505.07	2	B							59/53						--	FRX1	ULIX 1
K4505.21	2	P							59/57						RST03	FRX2	ULIX1
K4505.28	2	P							60/57						KIN	FRX2	ULIX1
K4505.35	2	P							59/58						RST05	FRX2	ULIX1
K4505.10	2	B								57/51					--	--	ULIX 1
K4505.11	2	B								58/54					RST03	--	ULIX 1
K4505.12	2	B								56/52					KIN	--	ULIX 1
K4505.13	2	B								58/54					RST05	--	ULIX 1
K4505.08	2	B								58/54					--	FRX1	ULIX 1
K4505.22	2	P								59/58					RST03	FRX2	ULIX1
K4505.29	2	P								60/56					KIN	FRX2	ULIX1
K4505.36	2	P								59/58					RST05	FRX2	ULIX1
K4505.14	2	B									59/50				--	--	ULIX 1
K4505.09	2	P									58/57				--	FRX1	ULIX 1
K4505.15	2	P									59/58				RST03	FRX1	ULIX 1
K4505.16	2	P									58/57				KIN	FRX1	ULIX 1
K4505.17	2	P									59/58				RST05	FRX1	ULIX 1
K4505.23	2	P									59/60				RST03	FRX2	ULIX1

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[Click on USG DESIGN NUMBER to see detail Design Page](#)

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USG DESIGN NUMBER	HOUR	LEVEL	FIRE-RATING	SOUND-RATING LEVEL*	BARE	CARPET & PAD	CARPET ONLY	SHEET VINYL	SHEET VINYL WITH BACKER	VCT	LVT	LAMINATE	1/2" THICK ENG. WOOD	12"X12" CERAMIC TILE	SOUND ISOLATION MATERIAL	UNDERLAYMENT	CEILING COMPOSITION	
K4505.30	2	P												61/56		KIN	FRX2	ULIX1
K4505.37	2	P												59/60		RST05	FRX2	ULIX1
K4505.24	2	P												60/57		RST03	FRX2	ULIX1
K4505.31	2	P												61/58		KIN	FRX2	ULIX1
K4505.38	2	P												59/58		RST05	FRX2	ULIX1
ALAH501001	2	P												59/52		--	FRX1	ULIX1
ALAH501002	2	P												59/54		--	DUR1	ULIX1
K4505.40	2	P	59/48													--	--	ULIX2
K4505.41	2	P		60/79												--	--	ULIX2
K4505.42	2	P			60/58											--	--	ULIX2
K4505.43	2	P						60/56								--	FRX1	ULIX2
K4505.59	2	P						62/60								RST03	FRX2	ULIX2
K4505.66	2	D						62/61								KIN	FRX2	ULIX2
K4505.73	2	D						61/62								RST05	FRX2	ULIX2
K4505.44	2	P							60/57							--	FRX1	ULIX2
K4505.60	2	D							61/62							RST03	FRX2	ULIX2
K4505.67	2	D							61/62							KIN	FRX2	ULIX2
K4505.74	2	D							61/63							RST05	FRX2	ULIX2
K4505.45	2	P								61/57						--	FRX1	ULIX2
K4505.61	2	D								62/61						RST03	FRX2	ULIX2
K4505.68	2	D								62/62						KIN	FRX2	ULIX2
K4505.75	2	D								61/63						RST05	FRX2	ULIX2
K4505.46	2	P									61/57					--	FRX1	ULIX2
K4505.62	2	D									62/61					RST03	FRX2	ULIX2
K4505.69	2	D									62/62					KIN	FRX2	ULIX2
K4505.76	2	D									61/62					RST05	FRX2	ULIX2
K4505.51	2	P											59/55			--	--	ULIX2
K4505.52	2	P											60/56			RST03	--	ULIX2
K4505.53	2	D											59/58			KIN	--	ULIX2
K4505.54	2	P											59/58			RST05	--	ULIX2
K4505.47	2	P											60/58			--	FRX1	ULIX2
K4505.63	2	D											61/61			RST03	FRX2	ULIX2
K4505.70	2	D											61/61			KIN	FRX2	ULIX2

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[Click on USG DESIGN NUMBER to see detail Design Page](#)

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USG DESIGN NUMBER	HOUR	LEVEL	FLOOR COVERING (STC/IIC)																
			FIRE-RATING	SOUND-RATING LEVEL*	BARE	CARPET & PAD	CARPET ONLY	SHEET VINYL	SHEET VINYL WITH BACKER	VCT	LVT	LAMINATE	1/2" THICK ENG. WOOD	12"X12" CERAMIC TILE	SOUND ISOLATION MATERIAL	UNDERLAYMENT	CEILING COMPOSITION		
K4505.70	2	D											61/61				KIN	FRX2	ULIX2
K4505.77	2	P											60/62				RST05	FRX2	ULIX2
K4505.55	2	B												60/55			--	--	ULIX2
K4505.48	2	P												60/58			--	FRX1	ULIX2
K4505.56	2	D												61/61			RST03	FRX1	ULIX2
K4505.57	2	D												61/62			KIN	FRX1	ULIX2
K4505.58	2	D												61/63			RST05	FRX1	ULIX2
K4505.64	2	D												61/65			RST03	FRX2	ULIX2
K4505.71	2	D												62/63			KIN	FRX2	ULIX2
K4505.78	2	D												61/65			RST05	FRX2	ULIX2
K4505.65	2	D													61/61		RST03	FRX2	ULIX2
K4505.72	2	D													62/62		KIN	FRX2	ULIX2
K4505.79	2	D													61/61		RST05	FRX2	ULIX2
K4505.50	2	B													61/55		--	FRX1	ULIX2
K4505.49	2	P													61/57		--	DUR1	ULIX2

Click on USG DESIGN NUMBER to see detail Design Page

Bare

2-hour UL® Fire Design H501®

www.ULH501.com

USG Structural Panel Concrete Subfloor

Steel Beam w/ Clip Angle

4" x 4" Steel Plate

Steel Beam w/ Clip Angle

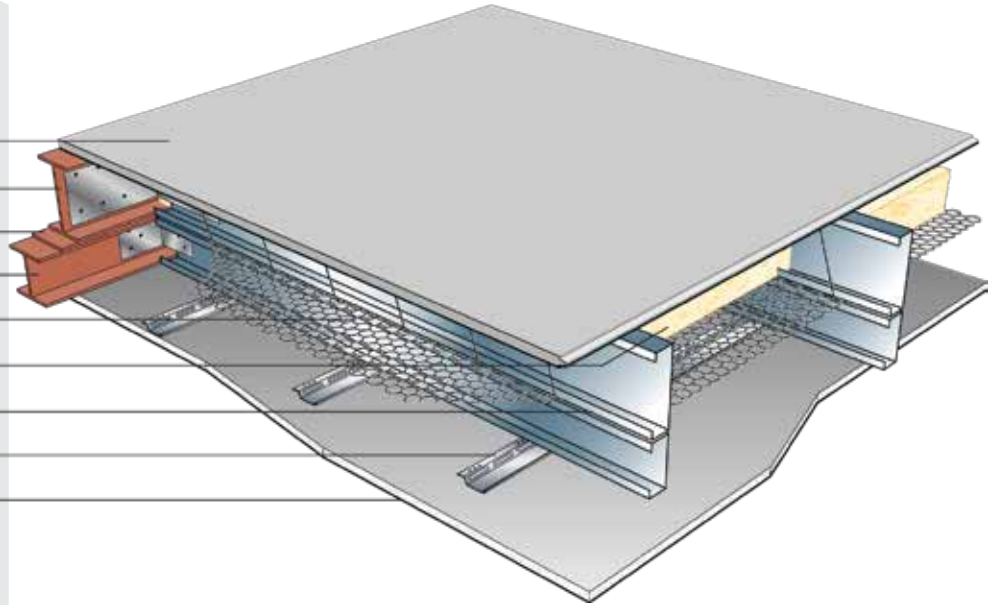
Wire Mesh

3-1/2" Glass Fiber Insulation

Cold-formed Steel C-Joists

RC-1 Deluxe Resilient Channel

5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	57	44	K4505.01

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

The acoustic values published in this manual are for the USG Structural Panel Concrete Subfloor, only. These values do not apply to Cement Bonded Particle Boards (CBPB) or Magnesium Oxide panels. The H501® assembly is protected by U.S. Patent No. 10,066,390. Substitution of any other panel into the H501® assembly is not allowed.

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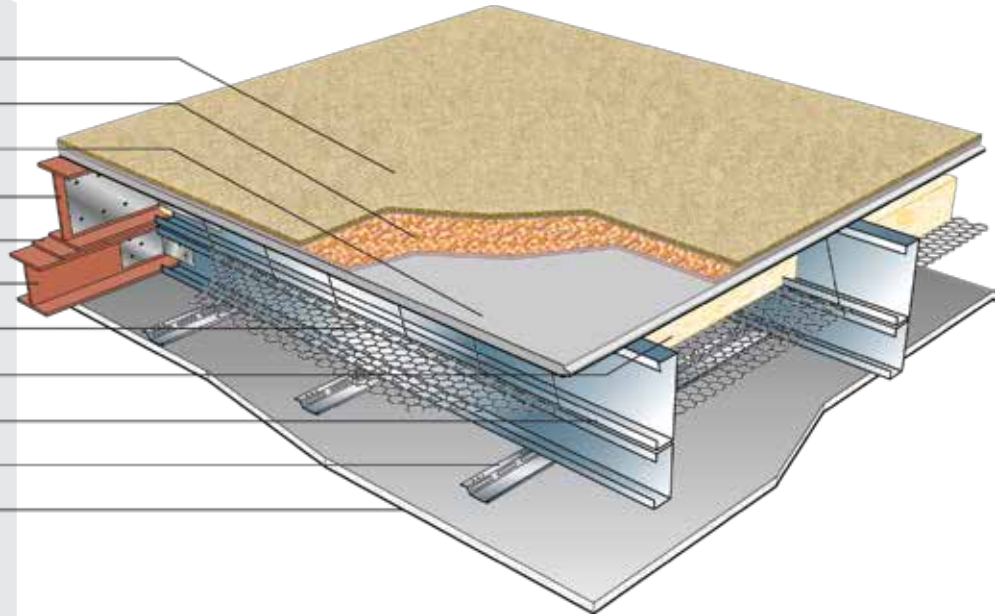
SCP116-01

Carpet & Pad

2-hour UL® Fire Design H501®

www.ULH501.com

Carpet
Padding
USG Structural Panel Concrete Subfloor
Steel Beam w/ Clip Angle
4" x 4" Steel Plate
Steel Beam w/ Clip Angle
Wire Mesh
3-1/2" Glass Fiber Insulation
Cold-formed Steel C-Joists
RC-1 Deluxe Resilient Channel
5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	73	K4505.02

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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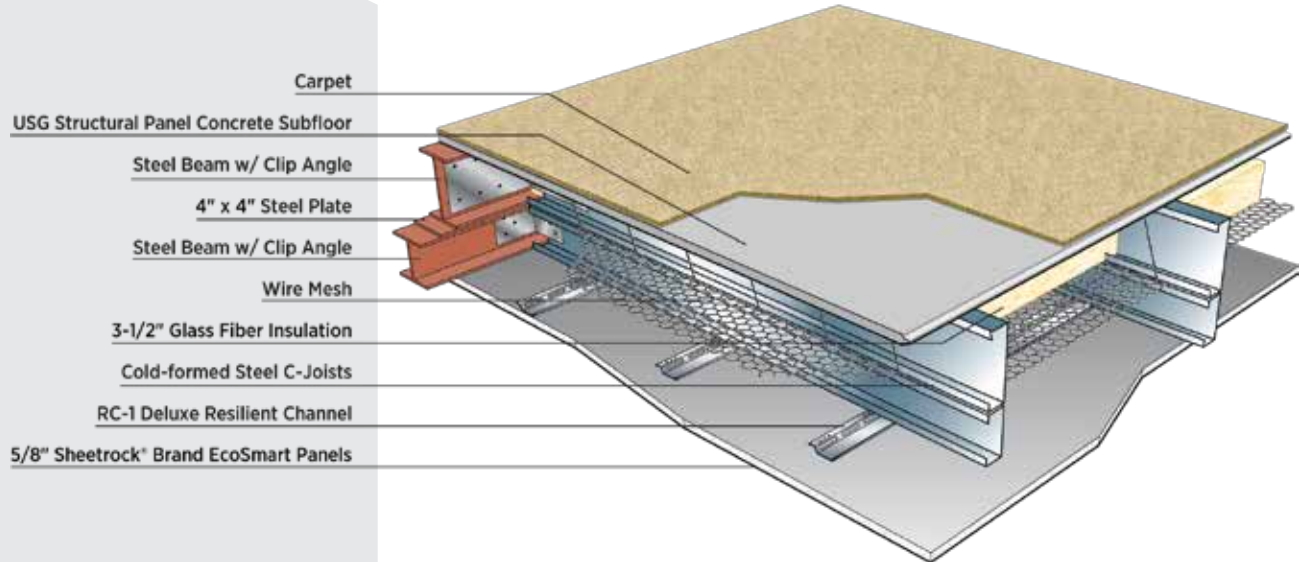
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SCP116-02

Carpet Only

2-hour UL® Fire Design H501®

www.ULH501.com



- Carpet
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels

Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	54	K4505.03

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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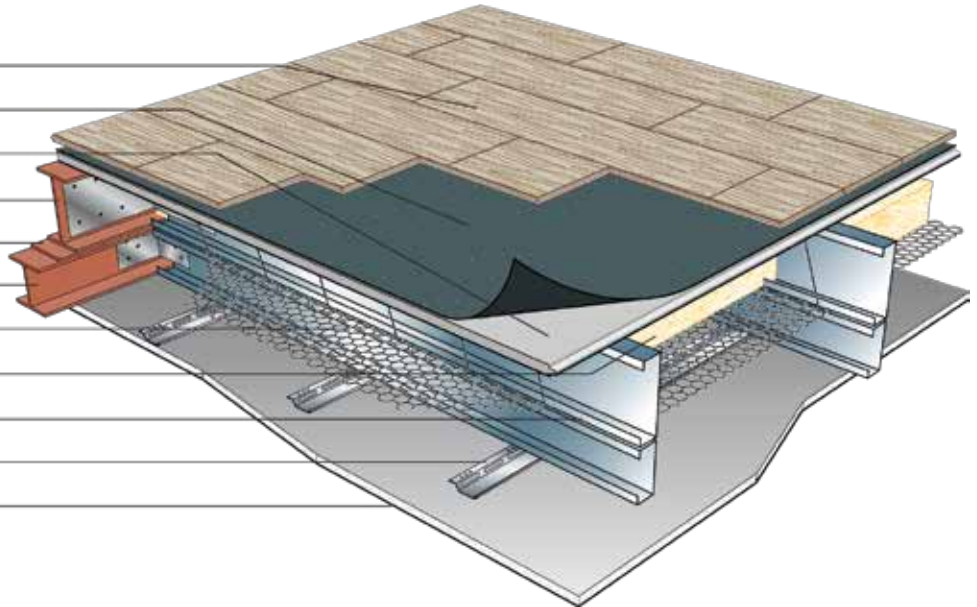
SCP116-03

Laminate

2-hour UL® Fire Design H501®

www.ULH501.com

- Laminate
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	57	51	K4505.10
PLITEQ GenieMat® RST03	58	54	K4505.11
KINETICS® 5/16" Soundmatt	56	52	K4505.12
PLITEQ GenieMat® RST05	58	54	K4505.13

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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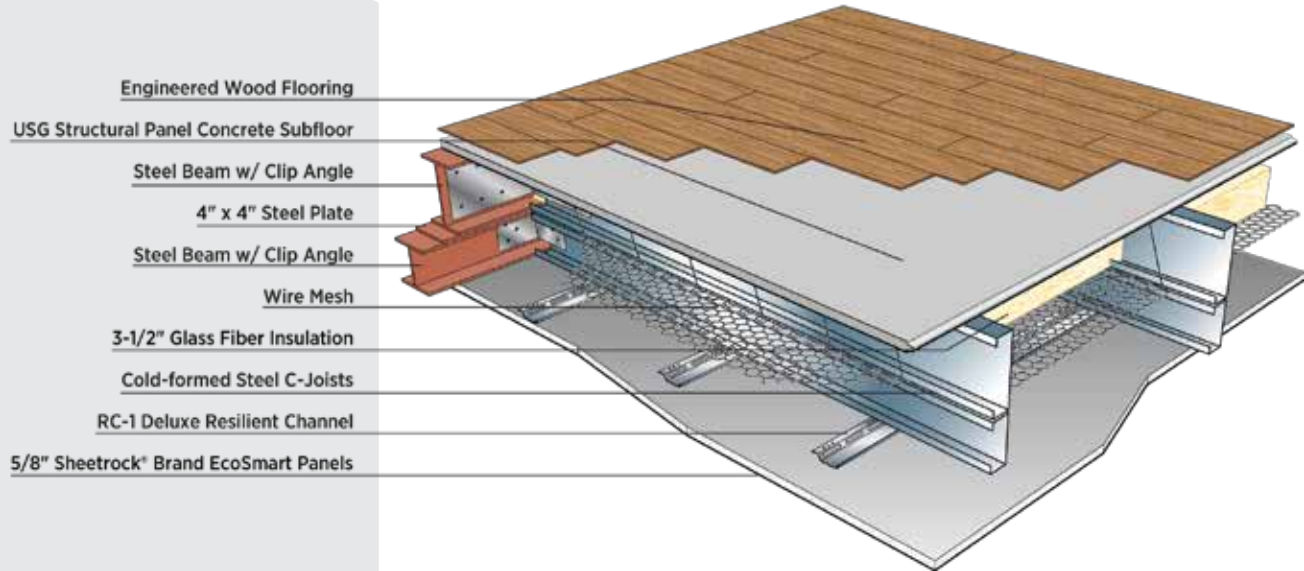
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1/2" Engineered Wood 2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	50	K4505.14

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
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CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
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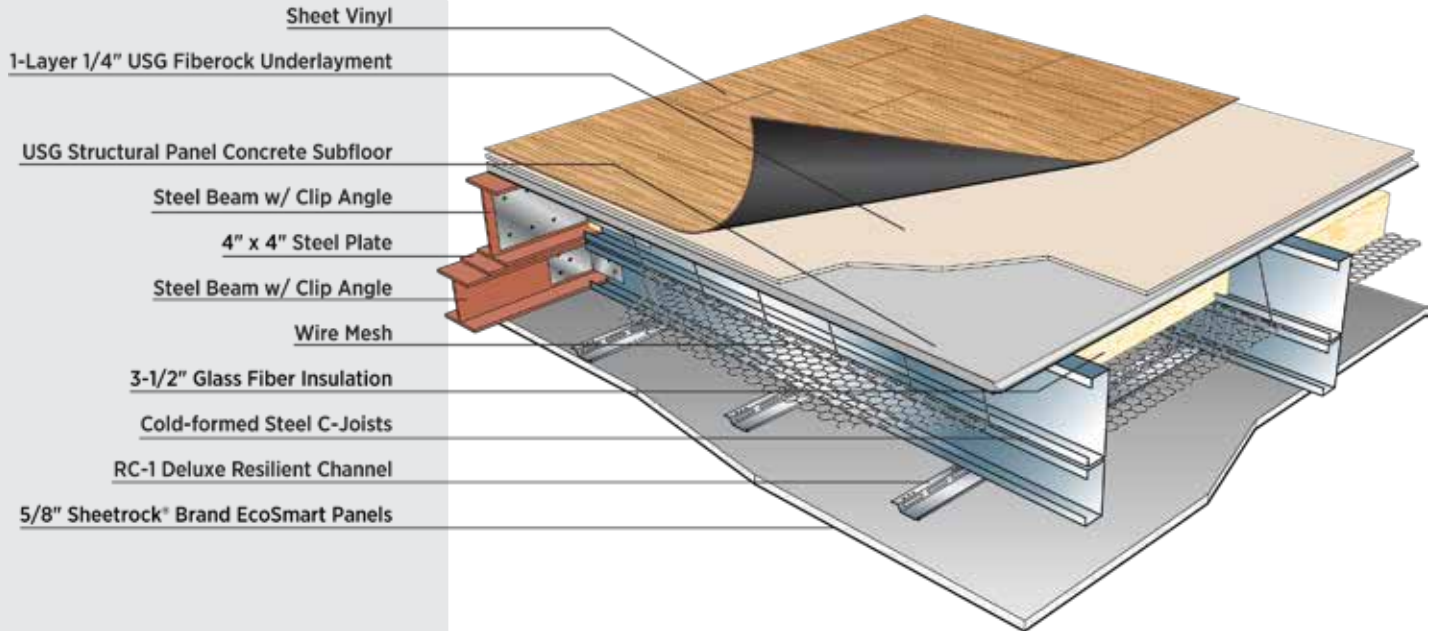
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SCP116-05

Sheet Vinyl

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	52	K4505.04

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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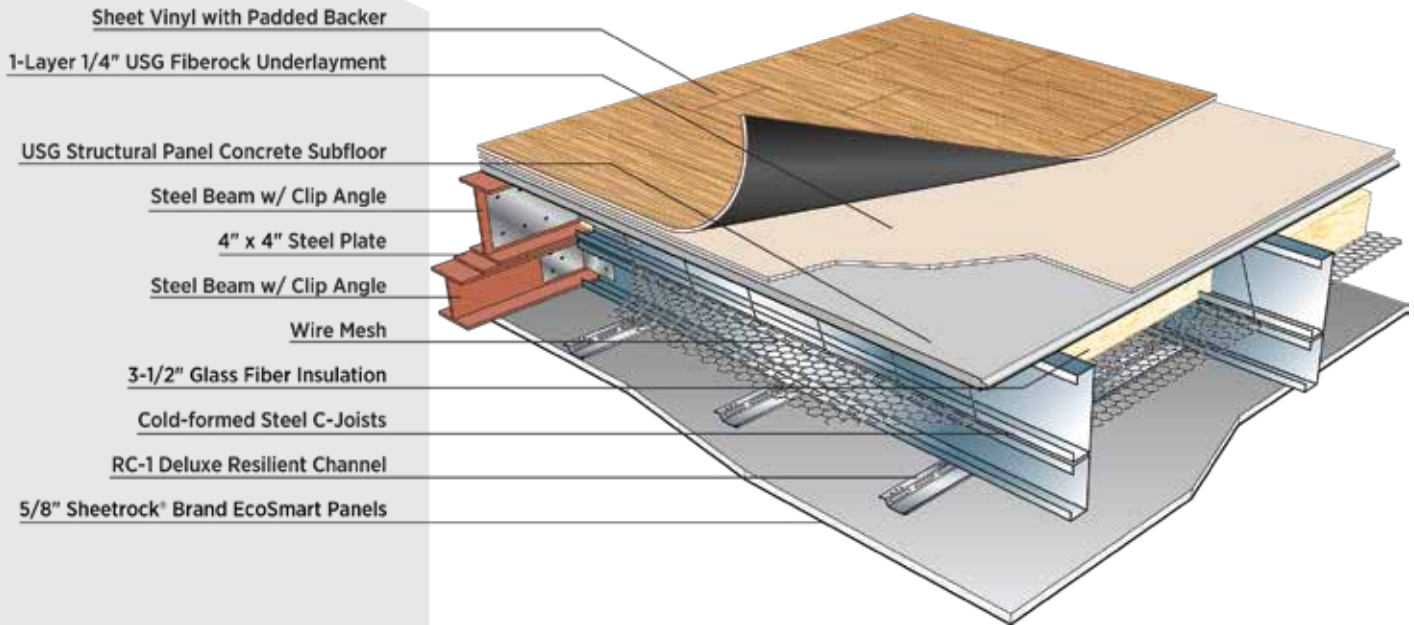
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SCP116-06

Sheet Vinyl with Padded Backer 2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	54	K4505.05

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:
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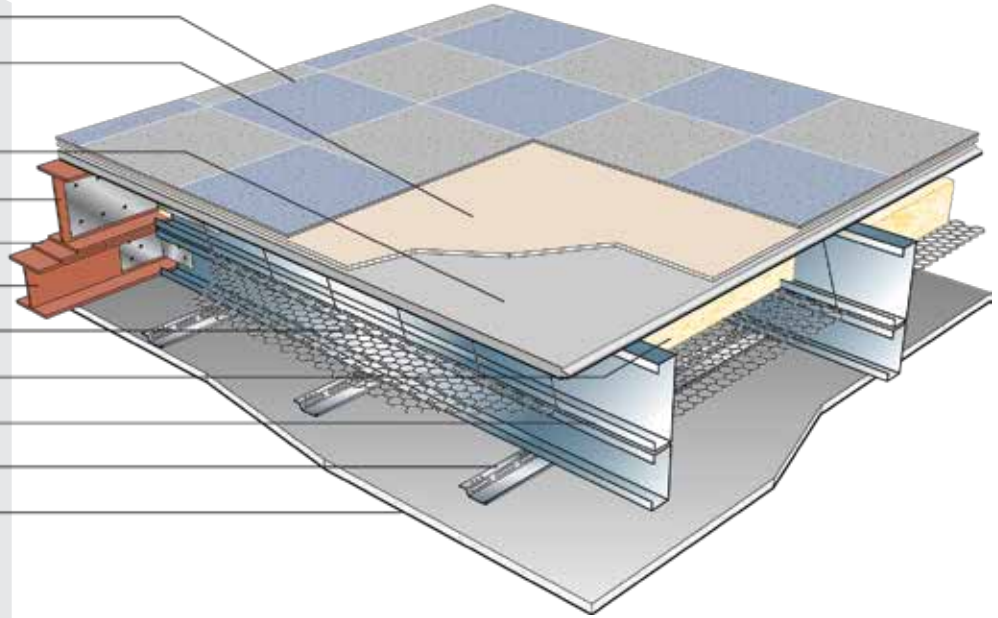
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SCP116-07

Vinyl Composite Tile (VCT) 2-hour UL® Fire Design H501®

www.ULH501.com

- Vinyl Composite Tile (VCT)
- 1-Layer 1/4" USG Fiberock Underlayment
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	52	K4505.06

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:
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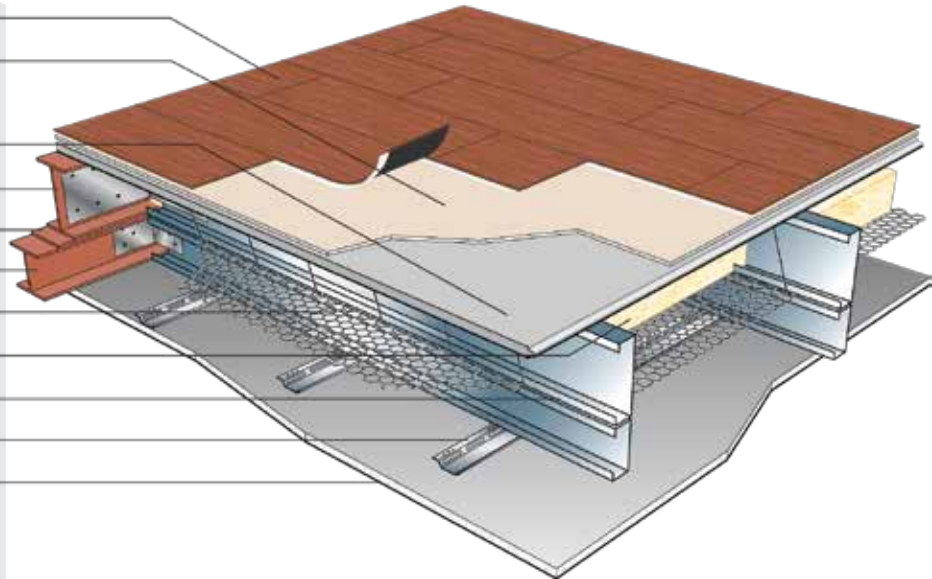
SCP116-08

Luxury Vinyl Tile (LVT)

2-hour UL® Fire Design H501®

www.ULH501.com

- Luxury Vinyl Tile (LVT)
- 1-Layer 1/4" USG Fiberock Underlayment
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand Firecode® C Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	53	K4505.07

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:
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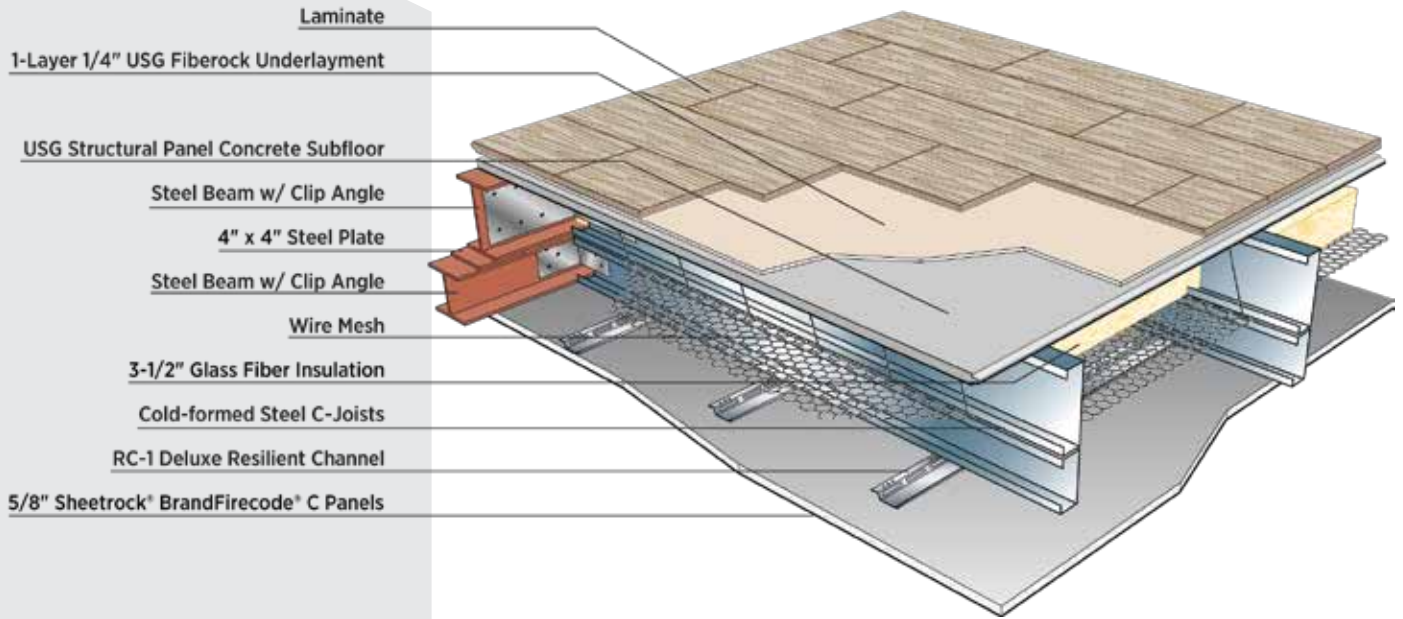
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Laminate

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	54	K4505.08

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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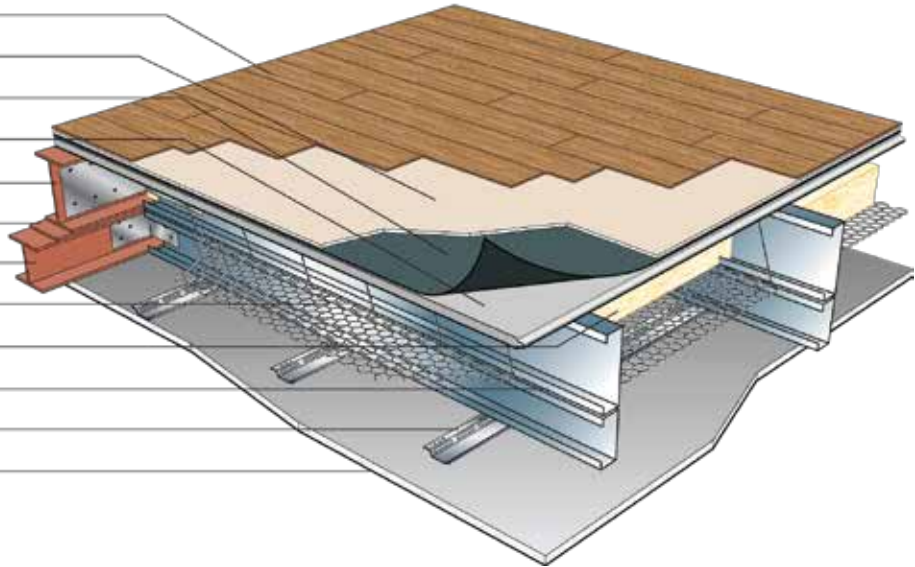
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SCP116-10

1/2" Engineered Wood 2-hour UL® Fire Design H501®

www.ULH501.com

- Engineered Wood Flooring
- 1-Layer 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	58	57	K4505.09
PLITEQ GenieMat® RST03	59	58	K4505.15
KINETICS® 5/16" Soundmatt	58	57	K4505.16
PLITEQ GenieMat® RST05	59	58	K4505.17

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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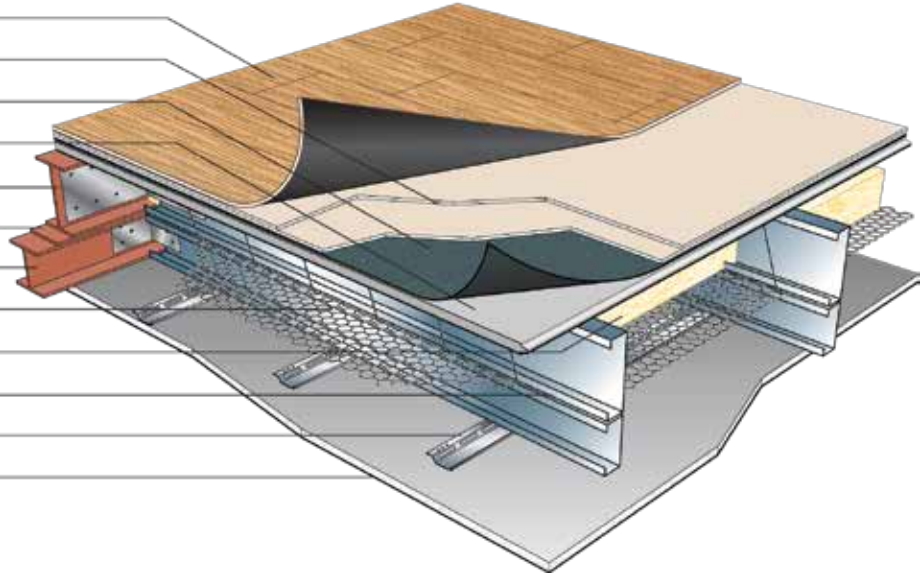
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Sheet Vinyl

2-hour UL® Fire Design H501®

www.ULH501.com

- Sheet Vinyl with Padded Backer
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	59	57	K4505.18
KINETICS® 5/16" Soundmatt	59	57	K4505.25
PLITEQ GenieMat® RST05	58	58	K4505.32

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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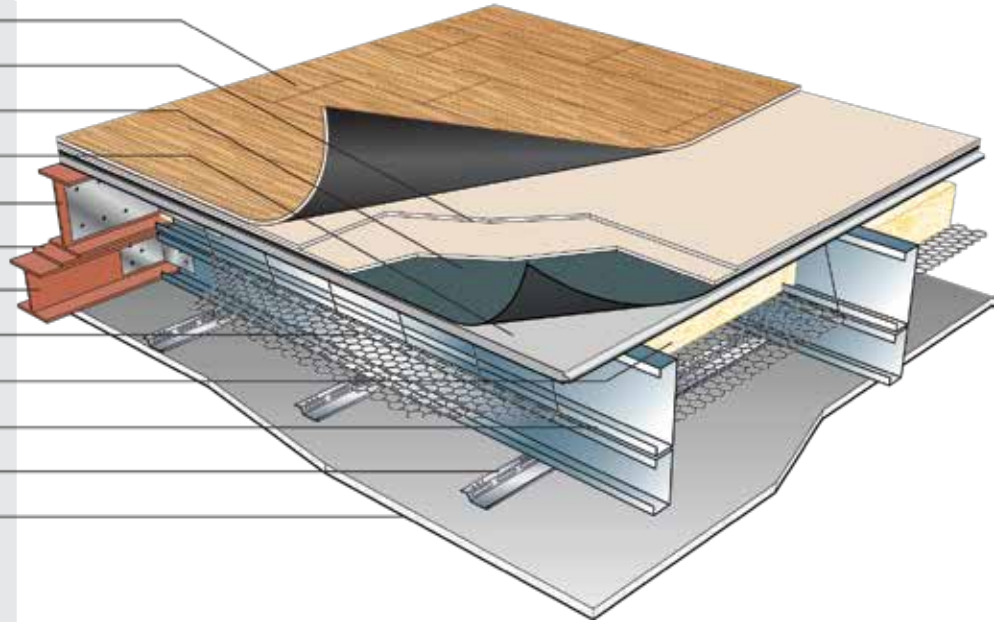
SCP116-12

Sheet Vinyl with Padded Backer

2-hour UL® Fire Design H501®

www.ULH501.com

Sheet Vinyl with Padded Backer
2-Layers 1/4" USG Fiberock Underlayment
Sound Isolation Material (see table below)
USG Structural Panel Concrete Subfloor
Steel Beam w/ Clip Angle
4" x 4" Steel Plate
Steel Beam w/ Clip Angle
Wire Mesh
3-1/2" Glass Fiber Insulation
Cold-formed Steel C-Joists
RC-1 Deluxe Resilient Channel
5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	59	57	K4505.19
KINETICS® 5/16" Soundmatt	60	56	K4505.26
PLITEQ GenieMat® RST05	58	58	K4505.33

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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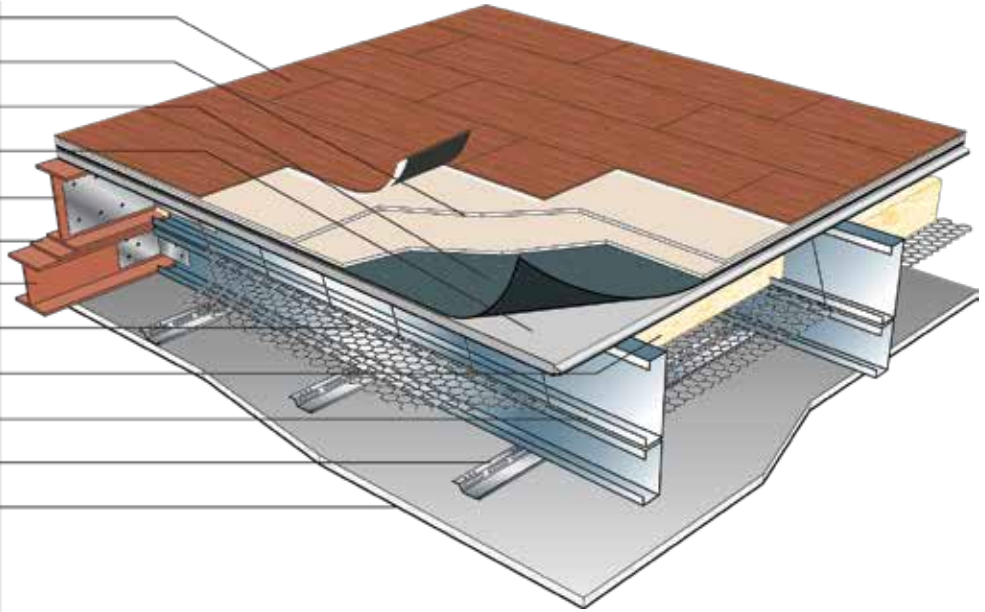
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SCP116-13

Vinyl Composite Tile (VCT) 2-hour UL® Fire Design H501®

www.ULH501.com

- Luxury Vinyl Tile (LVT)
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® BrandFirecode® C Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	60	58	K4505.20
KINETICS® 5/16" Soundmatt	61	57	K4505.27
PLITEQ GenieMat® RST05	59	59	K4505.34

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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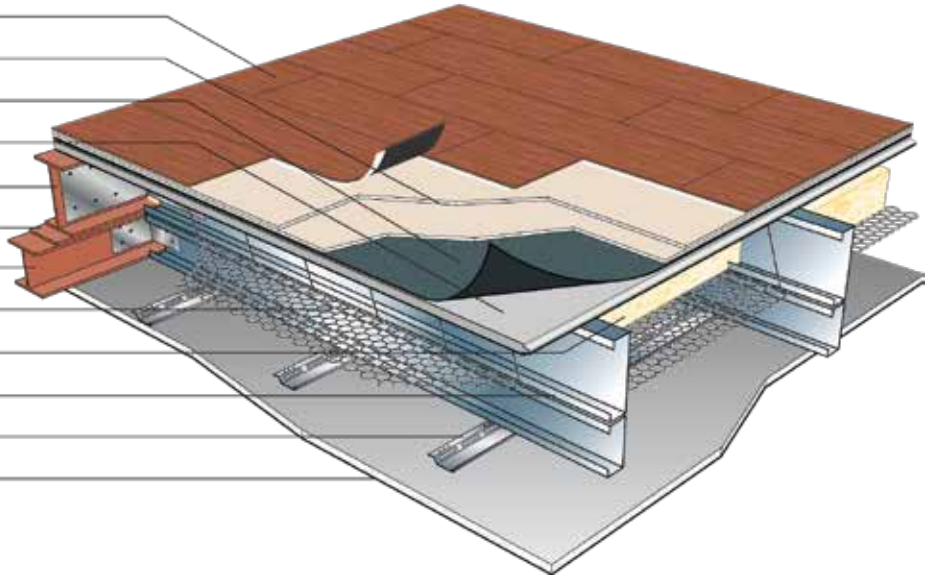
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Luxury Vinyl Tile (LVT)

2-hour UL® Fire Design H501®

www.ULH501.com

- Luxury Vinyl Tile (LVT)
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand Firecode® C Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	59	57	K4505.21
KINETICS® 5/16" Soundmatt	60	57	K4505.28
PLITEQ GenieMat® RST05	59	58	K4505.35

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:
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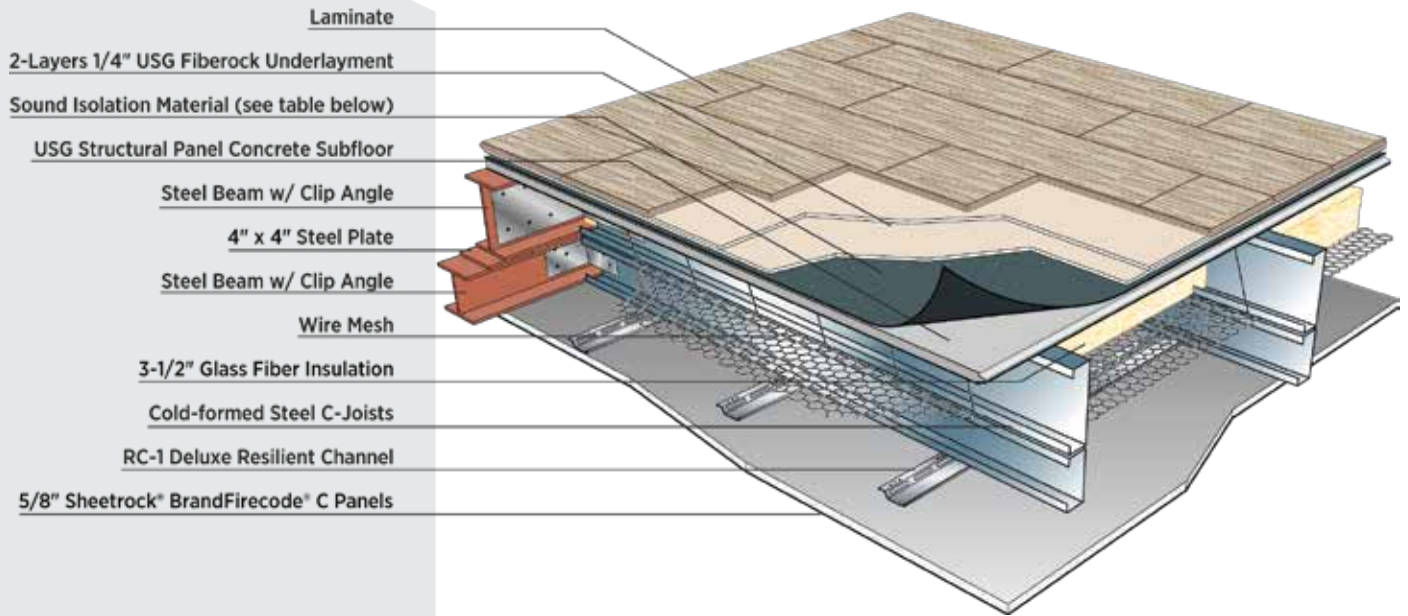
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Laminate

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Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	59	58	K4505.22
KINETICS® 5/16" Soundmatt	60	56	K4505.29
PLITEQ GenieMat® RST05	59	58	K4505.36

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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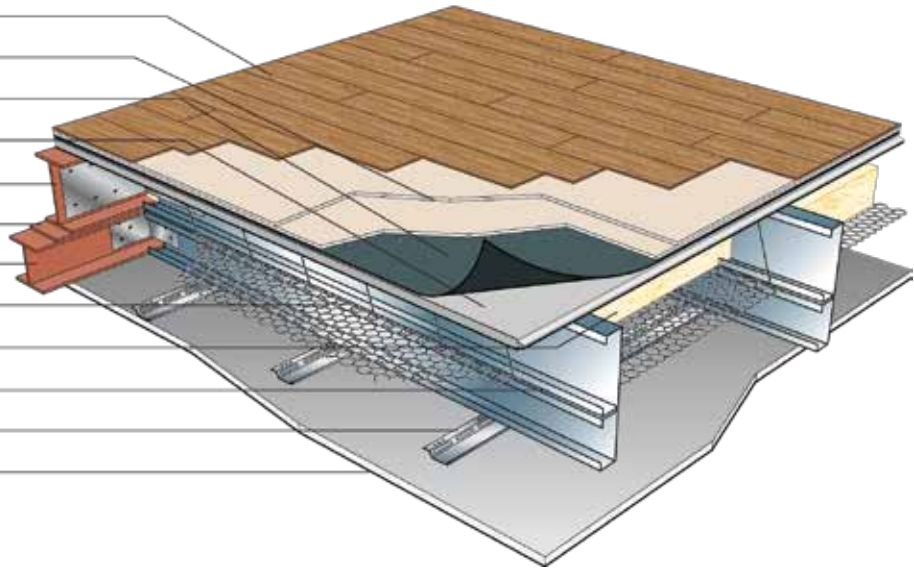
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SCP116-16

1/2" Engineered Wood 2-hour UL® Fire Design H501®

www.ULH501.com

- Engineered Wood Flooring
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	59	60	K4505.23
KINETICS® 5/16" Soundmatt	61	56	K4505.30
PLITEQ GenieMat® RST05	59	60	K4505.37

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:
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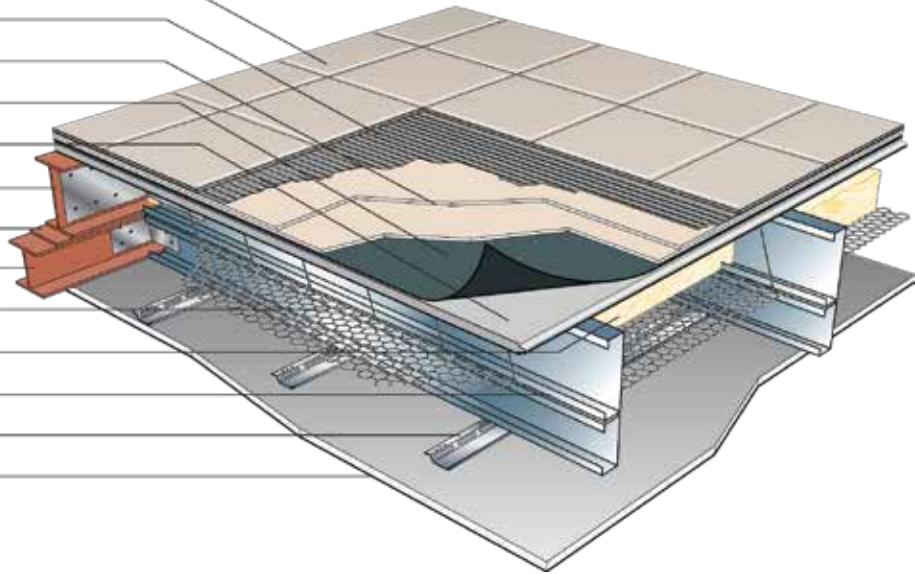
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12"x12" Ceramic Tile

2-hour UL® Fire Design H501®

www.ULH501.com

- Ceramic Tile
- Thin-Set Mortar
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	60	57	K4505.24
KINETICS® 5/16" Soundmatt	61	58	K4505.31
PLITEQ GenieMat® RST05	59	58	K4505.38

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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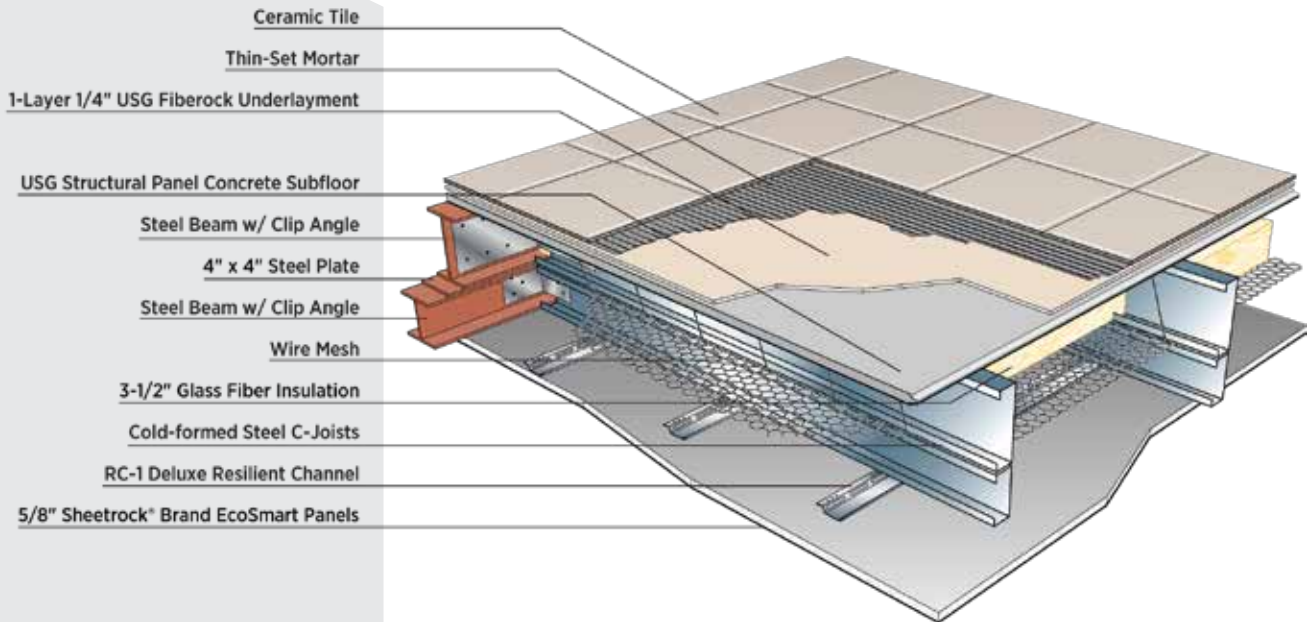
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12"x12" Ceramic Tile

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	52	ALAH501001

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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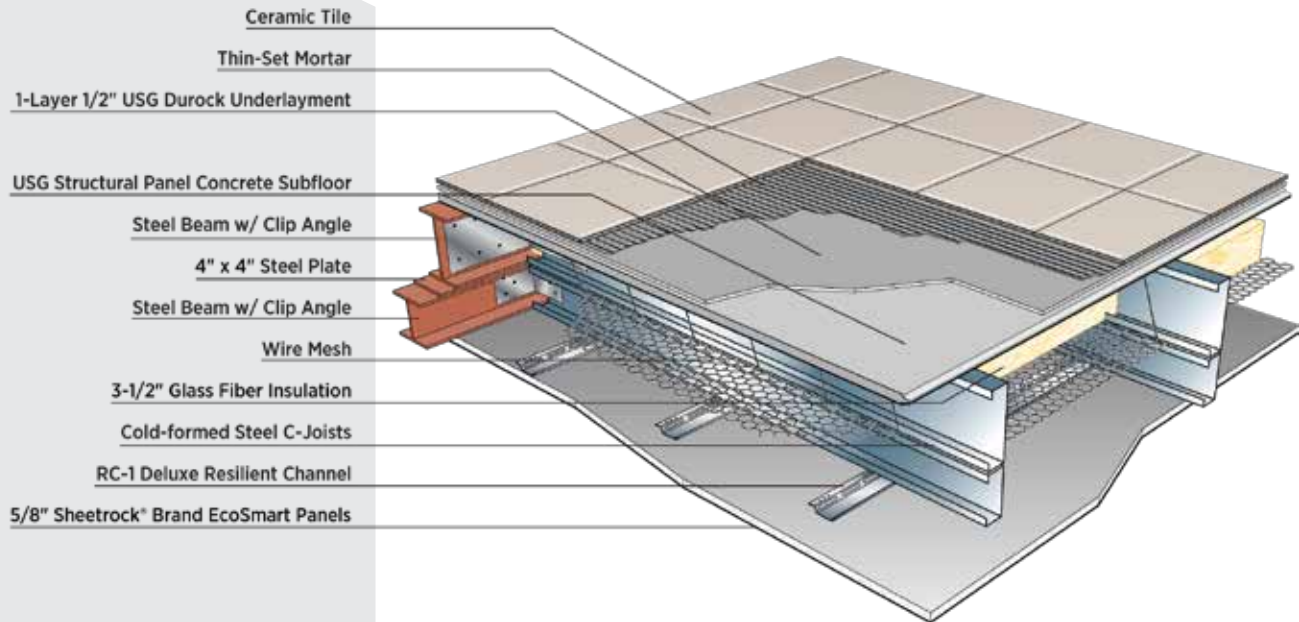
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12"x12" Ceramic Tile

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	54	ALAH501002

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **One (1) layer 5/8" USG Sheetrock® Brand EcoSmart Panel Firecode® X** (Type ULIX) fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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SCP116-20

Bare
2-hour UL® Fire Design H501®

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USG Structural Panel Concrete Subfloor

Steel Beam w/ Clip Angle

4" x 4" Steel Plate

Steel Beam w/ Clip Angle

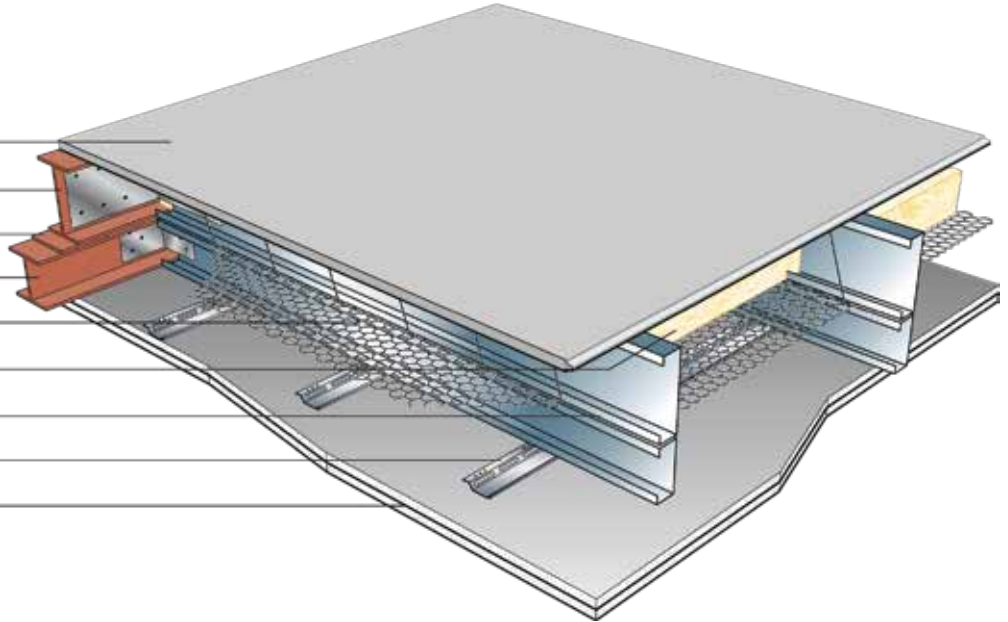
Wire Mesh

3-1/2" Glass Fiber Insulation

Cold-formed Steel C-Joists

RC-1 Deluxe Resilient Channel

5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	48	K4505.40

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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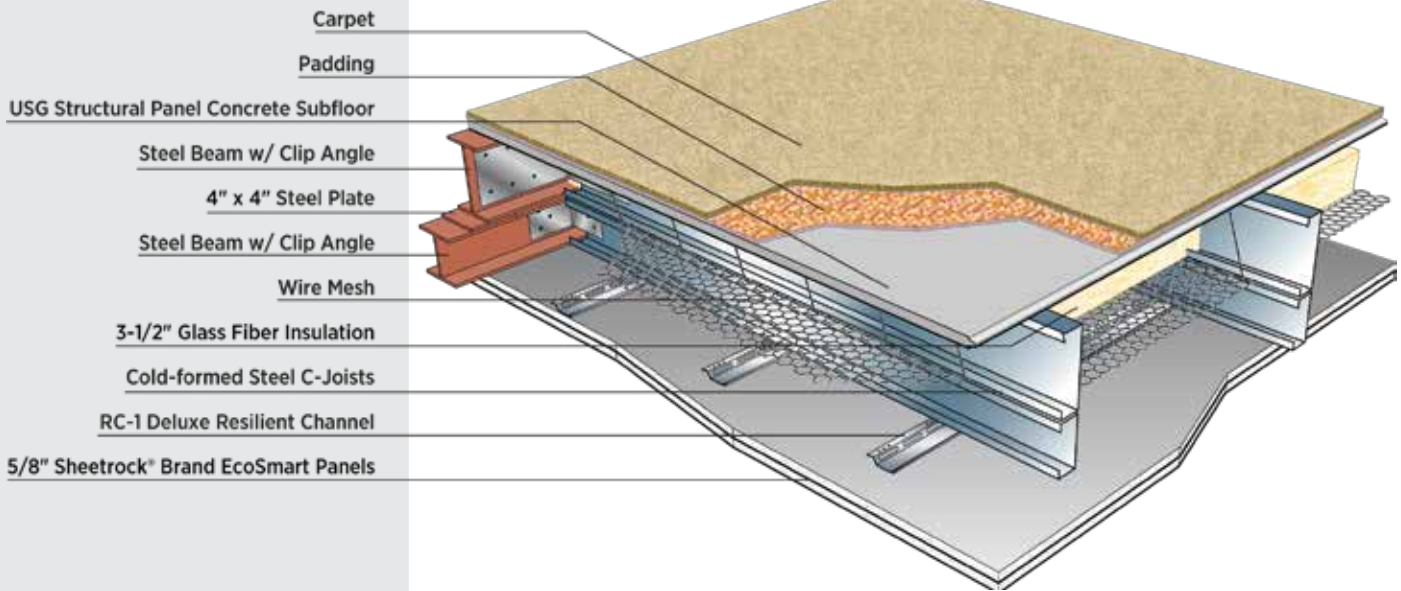
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Carpet & Pad

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	79	K4505.41

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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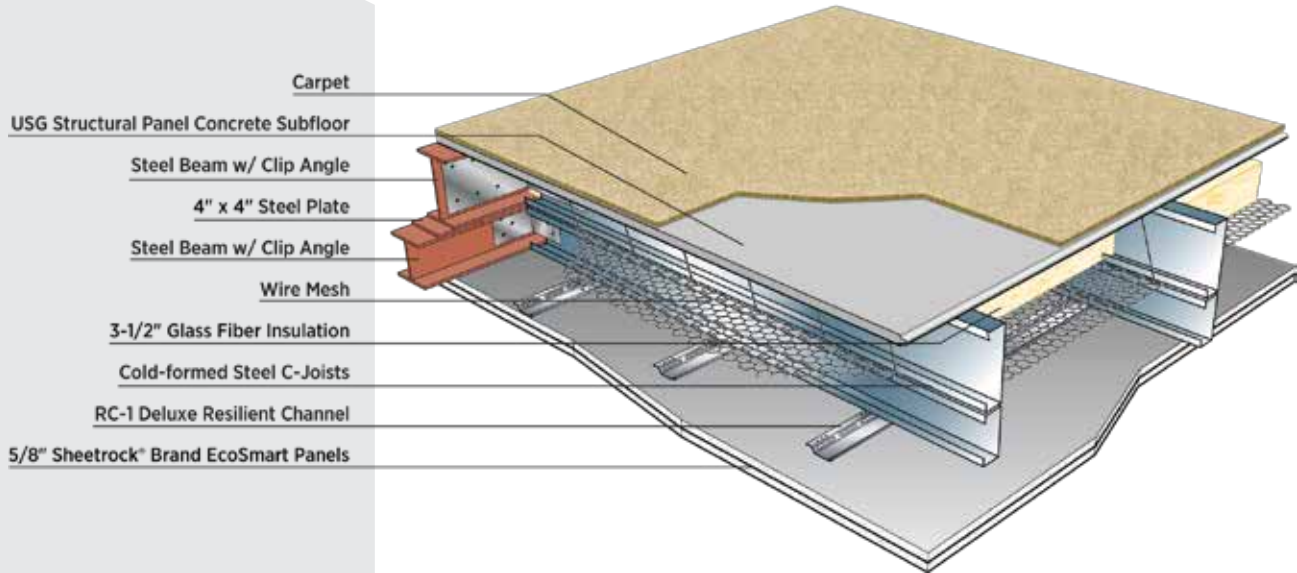
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Carpet Only

2-hour UL® Fire Design H501®

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- Carpet
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels

Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	58	K4505.42

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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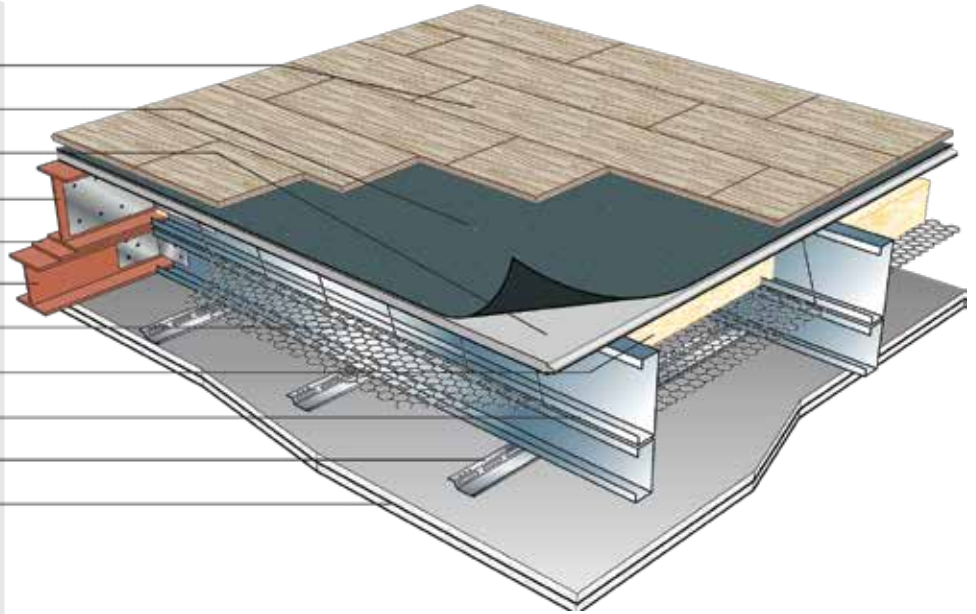
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Laminate

2-hour UL® Fire Design H501®

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- Laminate
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	59	55	K4505.51
PLITEQ GenieMat® RST03	60	56	K4505.52
KINETICS® 5/16" Soundmatt	59	58	K4505.53
PLITEQ GenieMat® RST05	59	58	K4505.54

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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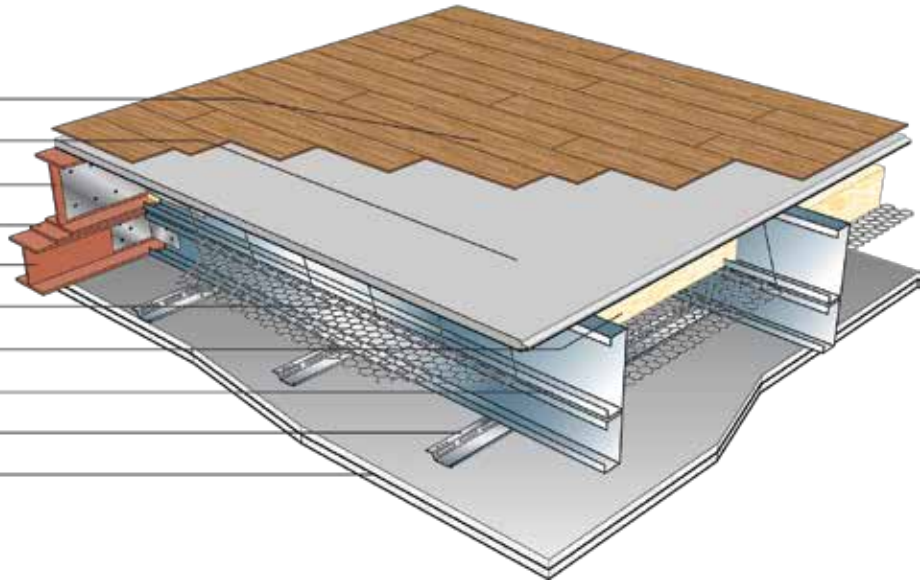
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1/2" Engineered Wood 2-hour UL® Fire Design H501®

www.ULH501.com

- Engineered Wood Flooring
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	55	K4505.55

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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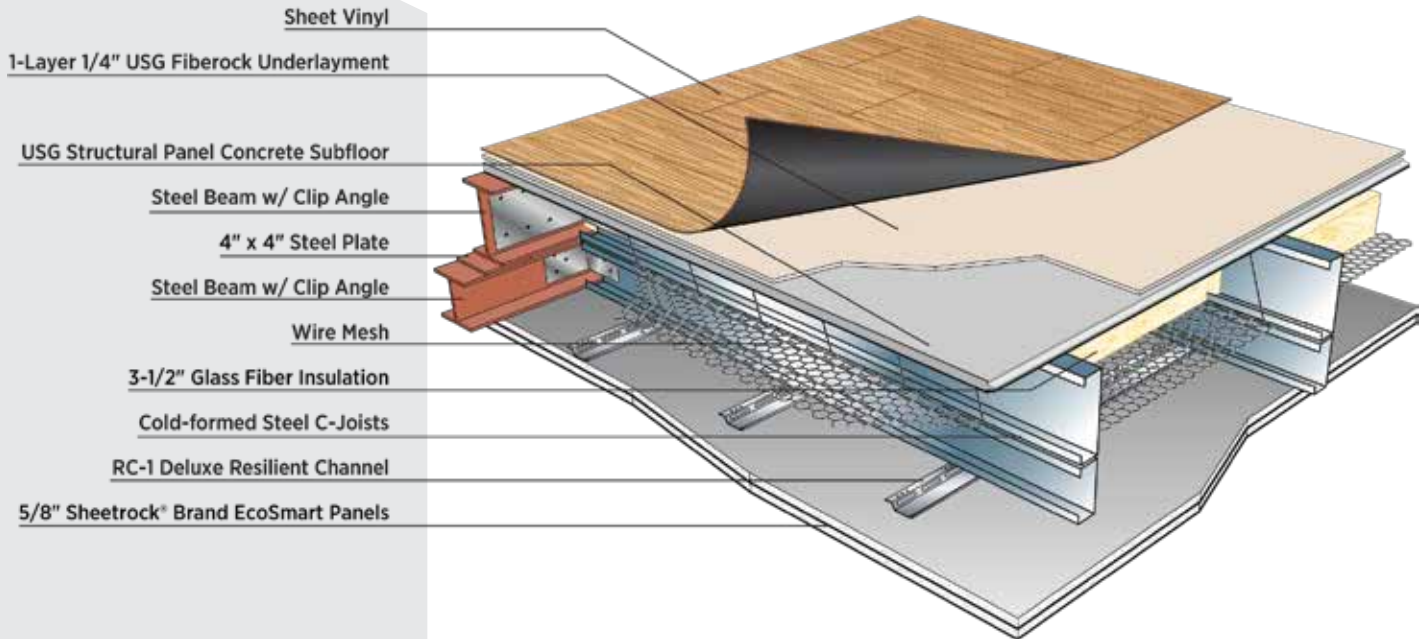
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SCP116-25

Sheet Vinyl

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	56	K4505.43

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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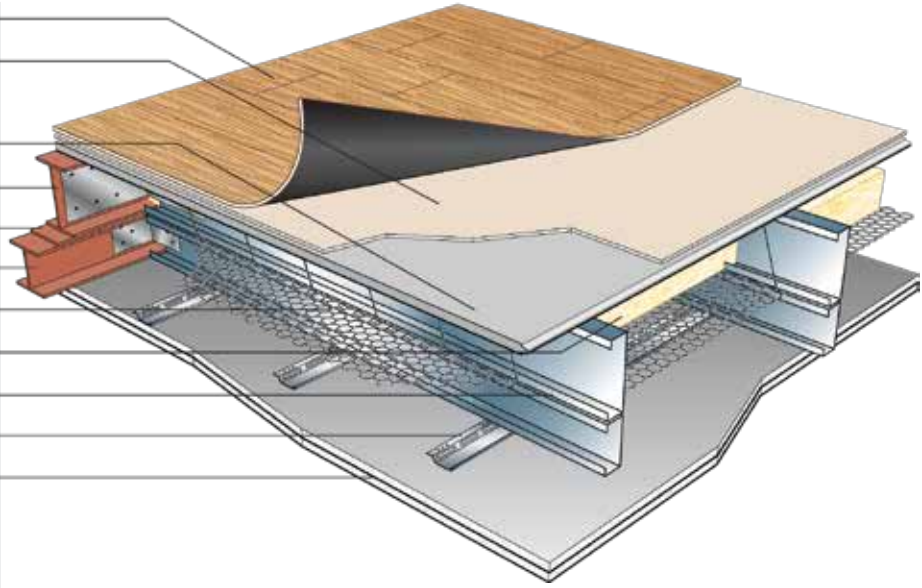
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SCP116-26

Sheet Vinyl with Padded Backer 2-hour UL® Fire Design H501®

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Sheet Vinyl with Padded Backer
1-Layer 1/4" USG Fiberock Underlayment
USG Structural Panel Concrete Subfloor
Steel Beam w/ Clip Angle
4" x 4" Steel Plate
Steel Beam w/ Clip Angle
Wire Mesh
3-1/2" Glass Fiber Insulation
Cold-formed Steel C-Joists
RC-1 Deluxe Resilient Channel
5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	57	K4505.44

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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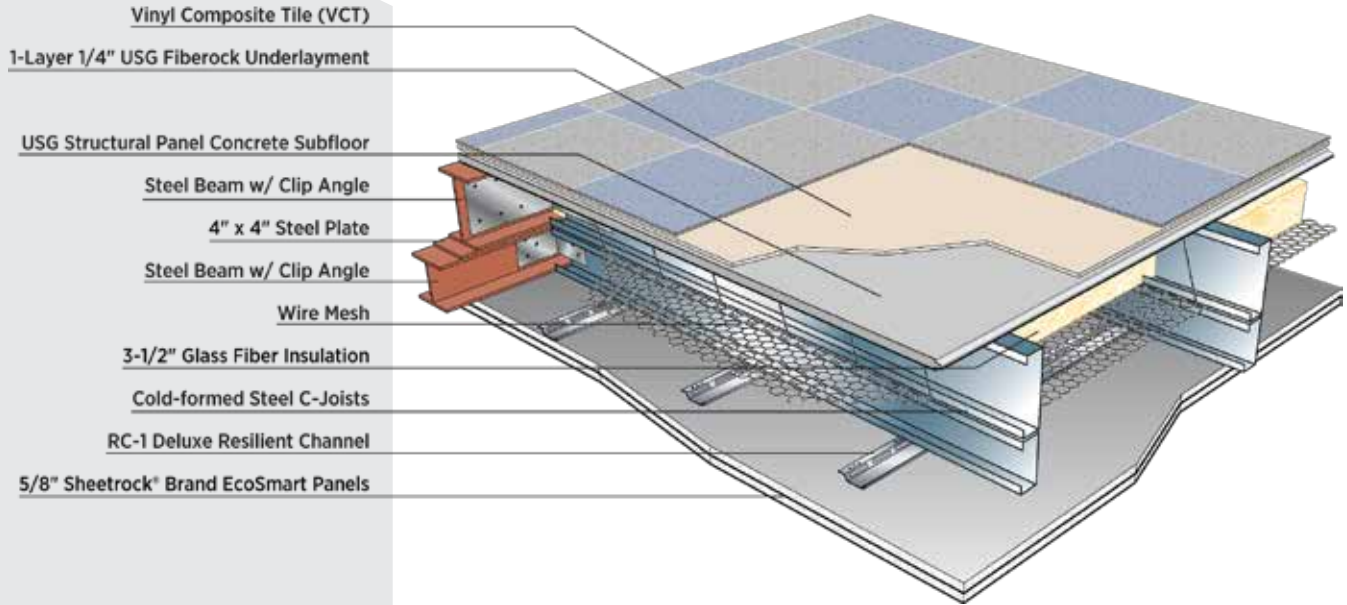
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SCP116-27

Vinyl Composite Tile (VCT) 2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	61	57	K4505.45

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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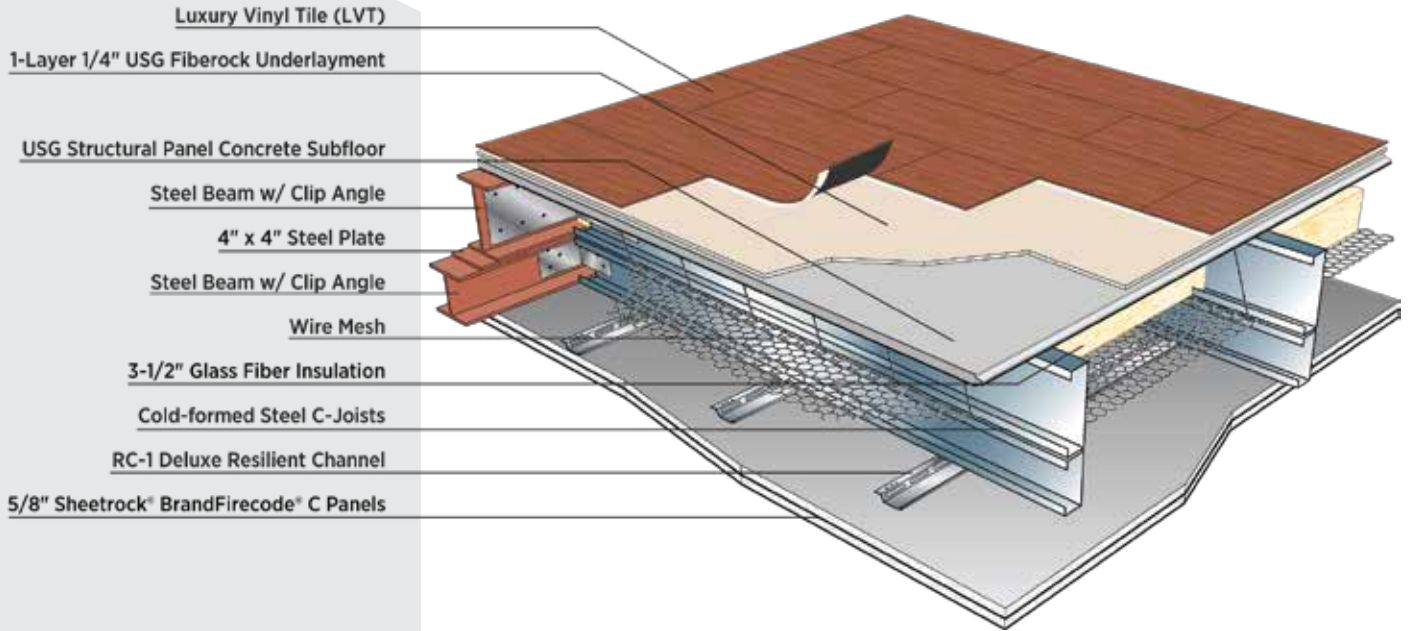
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Luxury Vinyl Tile (LVT)

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	61	57	K4505.46

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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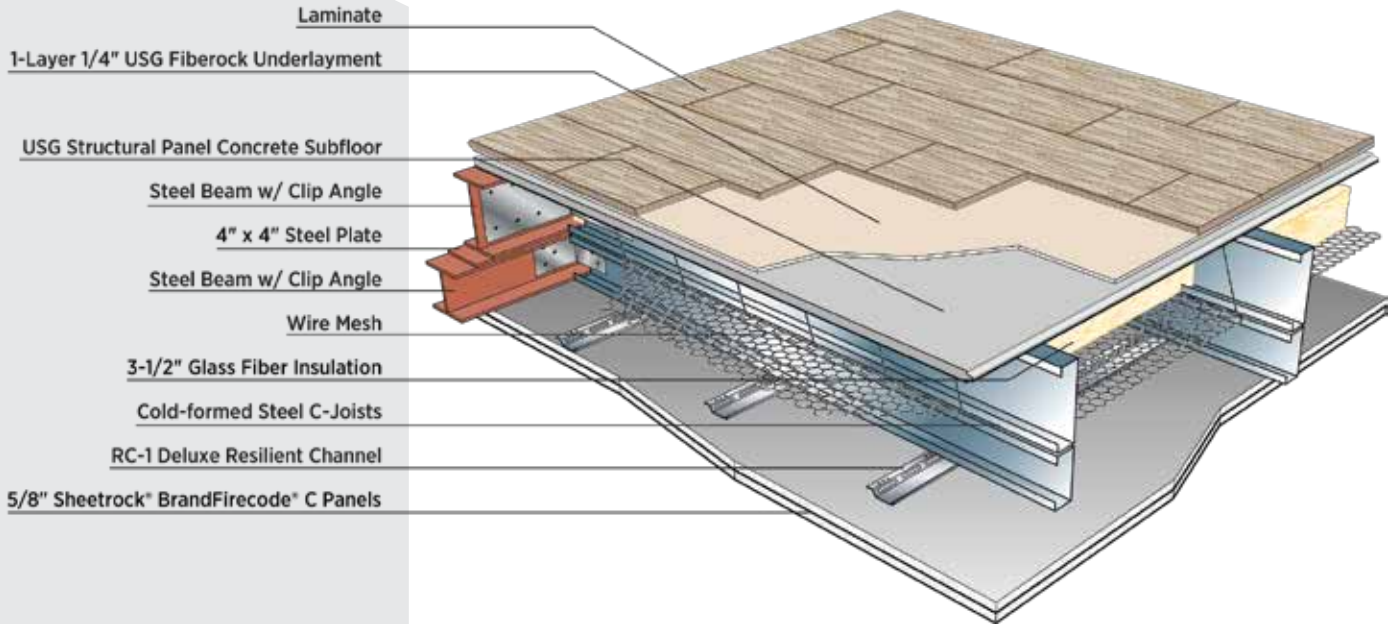
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Laminate

2-hour UL® Fire Design H501®

www.ULH501.com



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	58	K4505.47

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

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SCP116-30

1/2" Engineered Wood 2-hour UL® Fire Design H501®

www.ULH501.com

Engineered Wood Flooring

1-Layer 1/4" USG Fiberock Underlayment

Sound Isolation Material (see table below)

USG Structural Panel Concrete Subfloor

Steel Beam w/ Clip Angle

4" x 4" Steel Plate

Steel Beam w/ Clip Angle

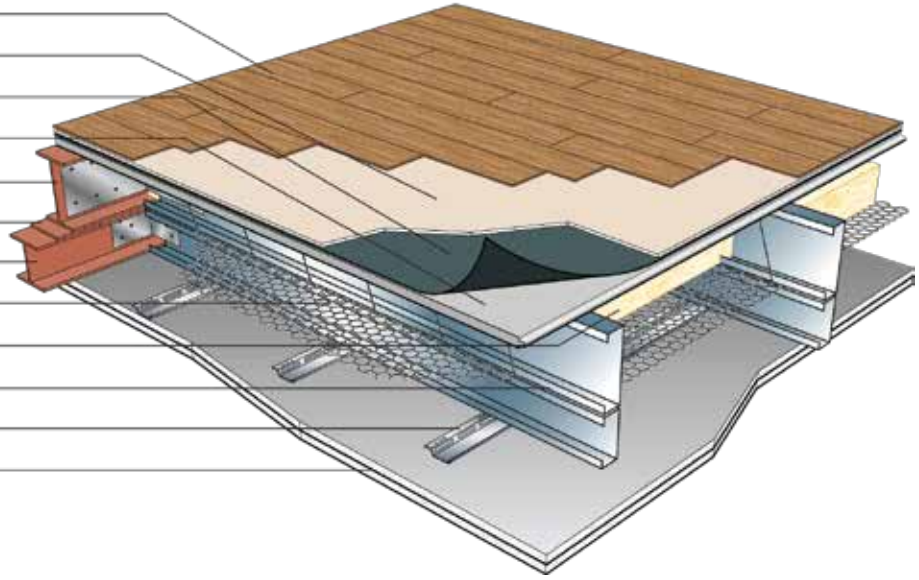
Wire Mesh

3-1/2" Glass Fiber Insulation

Cold-formed Steel C-Joists

RC-1 Deluxe Resilient Channel

5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	60	58	K4505.48
PLITEQ GenieMat® RST03	61	61	K4505.56
KINETICS® 5/16" Soundmatt	61	62	K4505.57
PLITEQ GenieMat® RST05	61	63	K4505.58

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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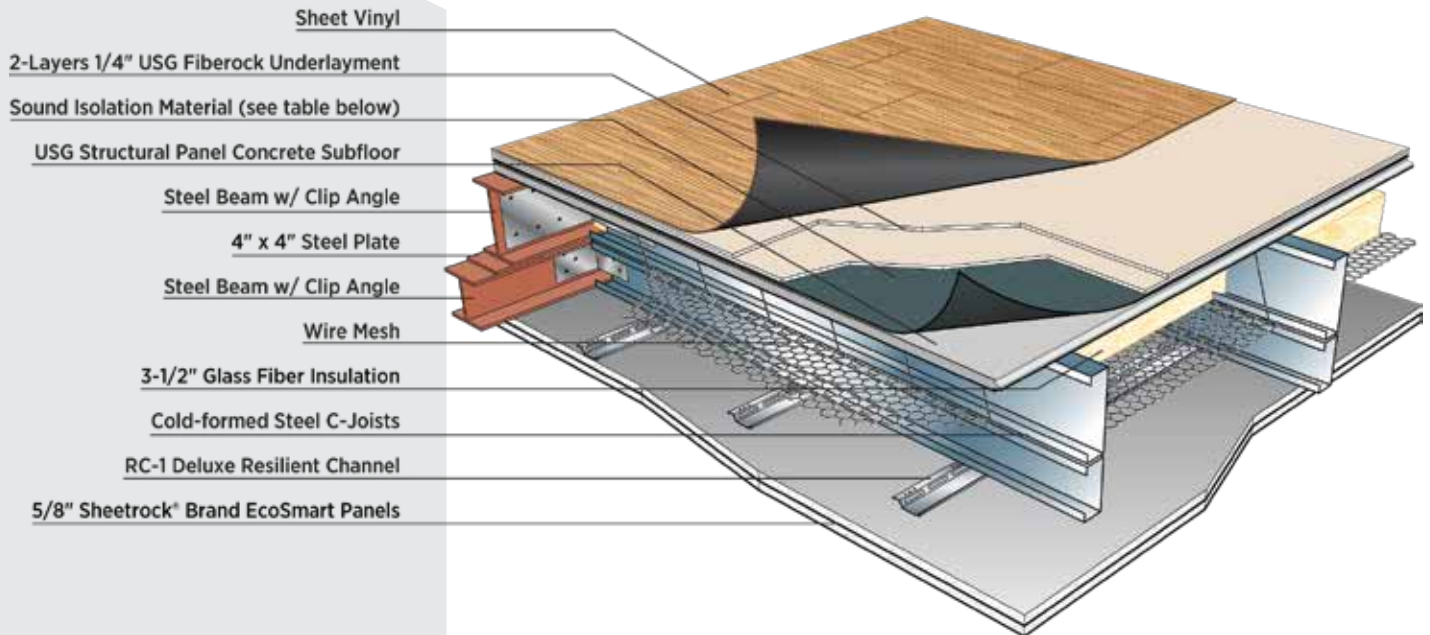
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Sheet Vinyl

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Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	62	60	K4505.59
KINETICS® 5/16" Soundmatt	62	61	K4505.66
PLITEQ GenieMat® RST05	61	62	K4505.73

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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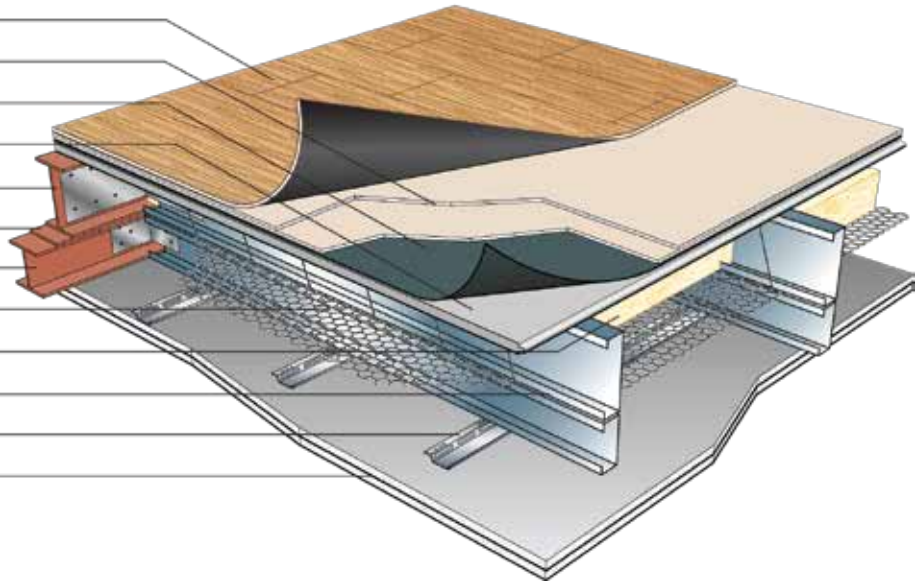
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Sheet Vinyl with Padded Backer

2-hour UL® Fire Design H501®

www.ULH501.com

- Sheet Vinyl with Padded Backer
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	61	62	K4505.60
KINETICS® 5/16" Soundmatt	61	62	K4505.67
PLITEQ GenieMat® RST05	61	63	K4505.74

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

Note:

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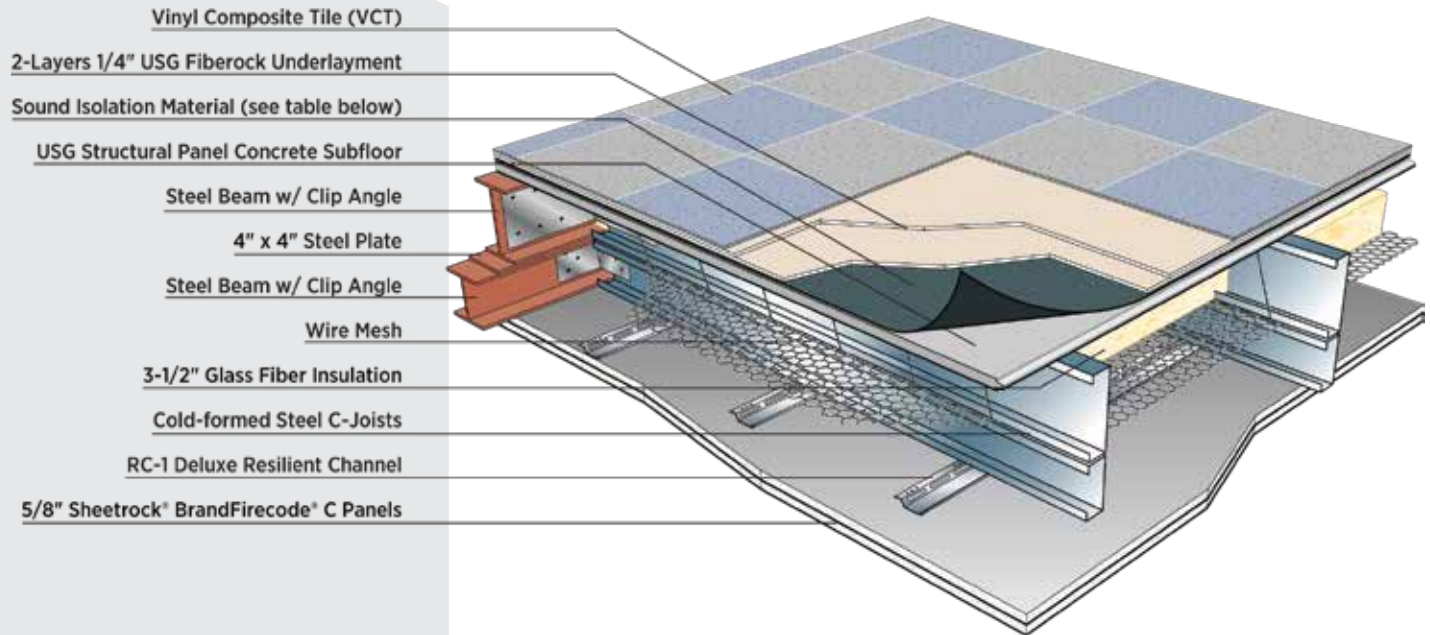
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Vinyl Composite Tile (VCT) 2-hour UL® Fire Design H501®

www.ULH501.com



- Vinyl Composite Tile (VCT)
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand Firecode® C Panels

Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	62	61	K4505.61
KINETICS® 5/16" Soundmatt	62	62	K4505.68
PLITEQ GenieMat® RST05	61	63	K4505.75

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12" o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24" o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12" o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12" o.c. Face layer fastened to resilient/furring channels with screws spaced 8" o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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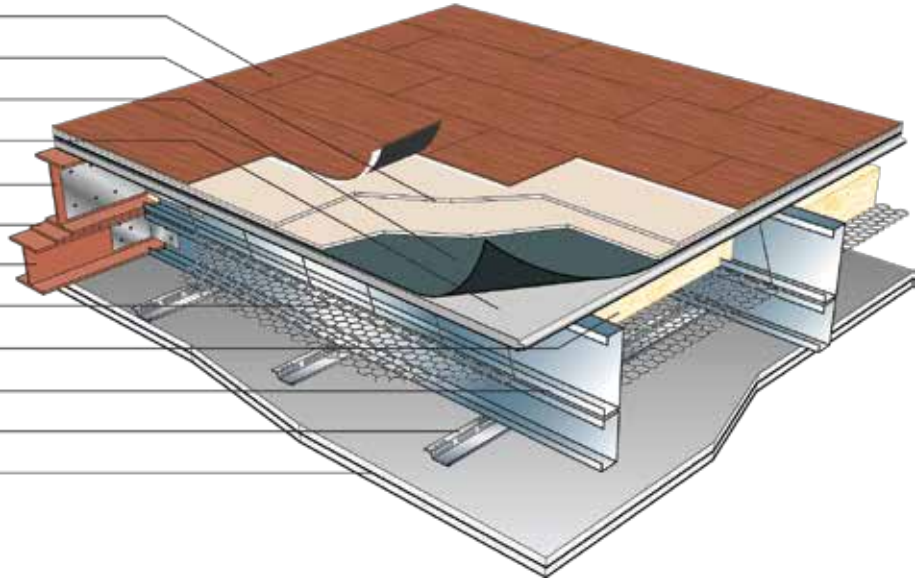
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Luxury Vinyl Tile (LVT)

2-hour UL® Fire Design H501®

www.ULH501.com

- Luxury Vinyl Tile (LVT)
- 2-Layers 1/4" USG Fiberock Underlayment
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® BrandFirecode® C Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	62	61	K4505.62
KINETICS® 5/16" Soundmatt	62	62	K4505.69
PLITEQ GenieMat® RST05	61	62	K4505.76

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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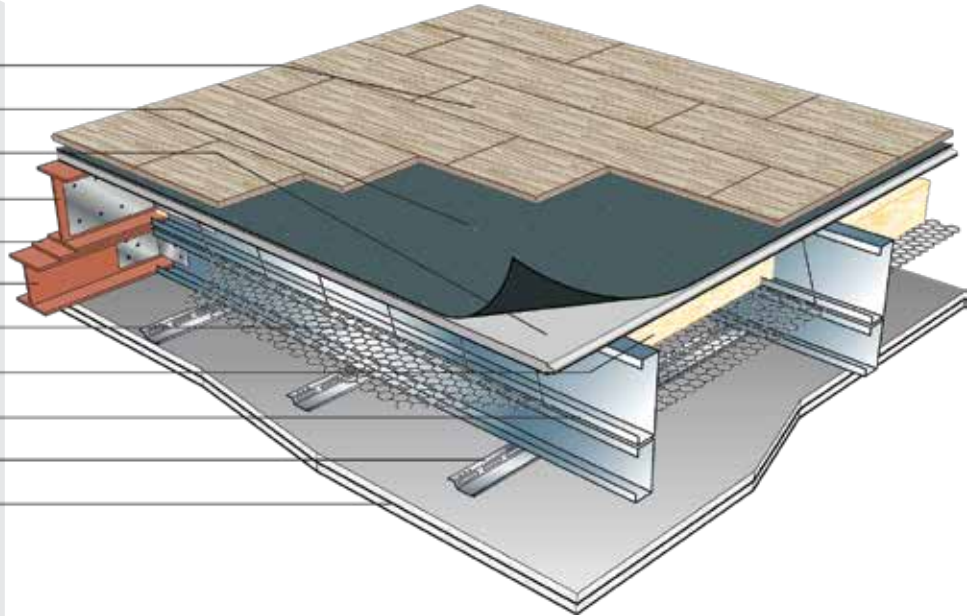
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Laminate

2-hour UL® Fire Design H501®

www.ULH501.com

- Laminate
- Sound Isolation Material (see table below)
- USG Structural Panel Concrete Subfloor
- Steel Beam w/ Clip Angle
- 4" x 4" Steel Plate
- Steel Beam w/ Clip Angle
- Wire Mesh
- 3-1/2" Glass Fiber Insulation
- Cold-formed Steel C-Joists
- RC-1 Deluxe Resilient Channel
- 5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	61	61	K4505.63
KINETICS® 5/16" Soundmatt	61	61	K4505.70
PLITEQ GenieMat® RST05	60	62	K4505.77

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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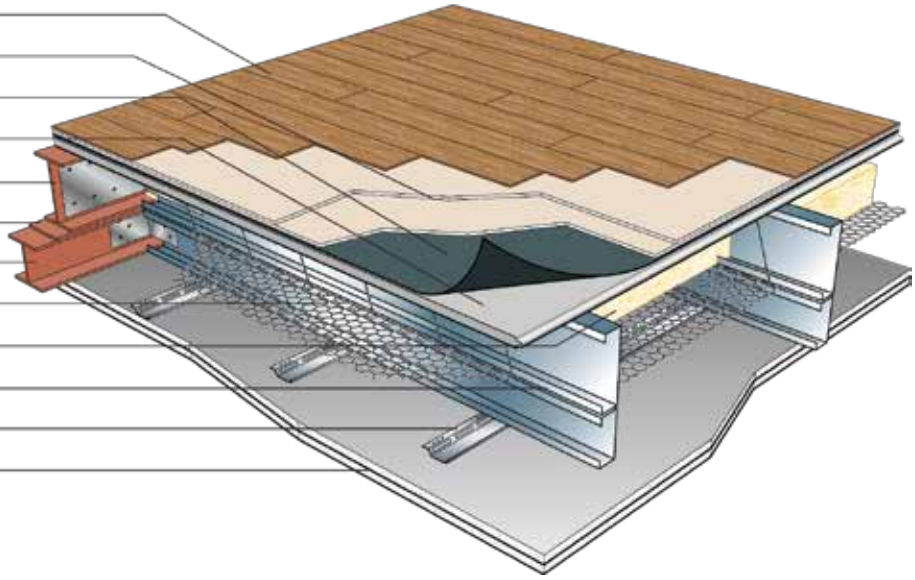
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1/2" Engineered Wood 2-hour UL® Fire Design H501®

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Engineered Wood Flooring
2-Layers 1/4" USG Fiberock Underlayment
Sound Isolation Material (see table below)
USG Structural Panel Concrete Subfloor
Steel Beam w/ Clip Angle
4" x 4" Steel Plate
Steel Beam w/ Clip Angle
Wire Mesh
3-1/2" Glass Fiber Insulation
Cold-formed Steel C-Joists
RC-1 Deluxe Resilient Channel
5/8" Sheetrock® Brand EcoSmart Panels



Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	61	65	K4505.64
KINETICS® 5/16" Soundmatt	62	63	K4505.71
PLITEQ GenieMat® RST05	61	65	K4505.78

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

See UL®-H501® design for all options and specific details (www.ULH501.com)

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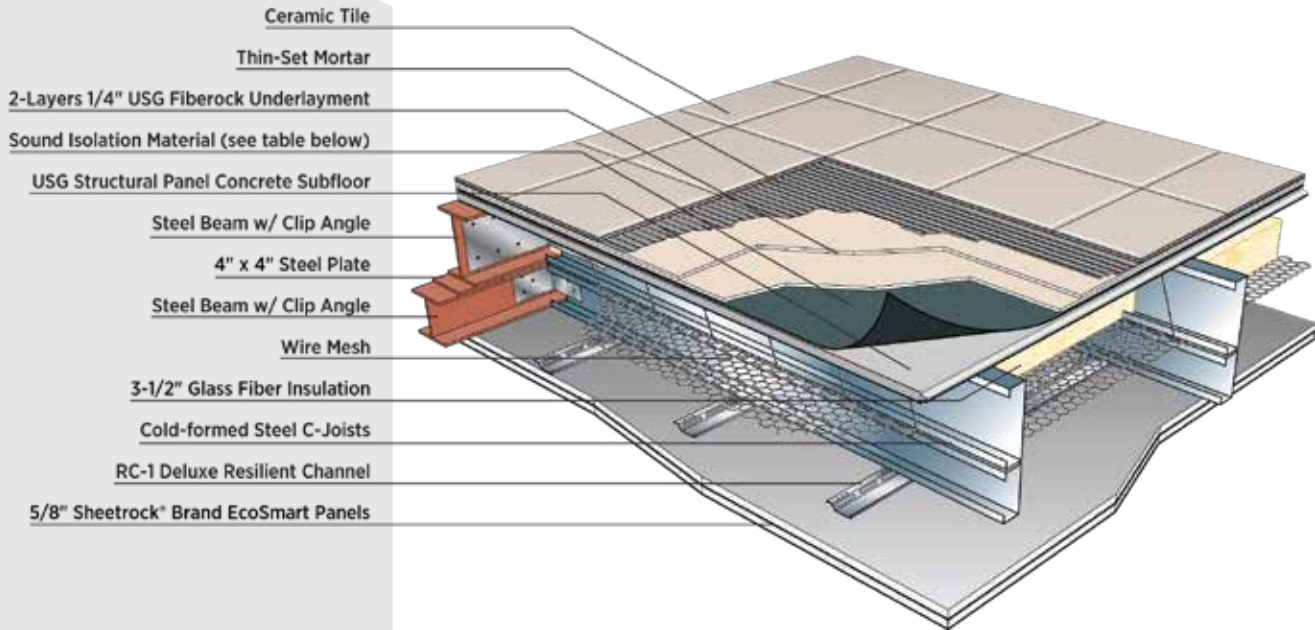
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12"x12" Ceramic Tile

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Sound Isolation Material	STC	IIC	USG Design No.
PLITEQ GenieMat® RST03	61	61	K4505.65
KINETICS® 5/16" Soundmatt	62	62	K4505.72
PLITEQ GenieMat® RST05	61	61	K4505.79

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8"o.c. at the perimeter and max. 12"o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24"o.c.
- **Glass Fiber Insulation**, 3-1/2" thick, fit into the framing cavity supported by 2" strapping spaced 12"o.c.

CEILING FRAMING

- **C-joists**, min. 4" deep, min. 1-5/8" wide flanges, min. 54 mil. (16 gauge), spaced max. 24"o.c.
- **Resilient channels**, 1/2" deep, min. 18 mil. (25 gauge), spaced max. 12"o.c.
- **Two (2) layers of 5/8" USG Sheetrock® Brand EcoSmart Panels Firecode® X (Type ULIX)**. Base layer fastened to resilient/furring channels with screws spaced 12"o.c. Face layer fastened to resilient/furring channels with screws spaced 8"o.c.

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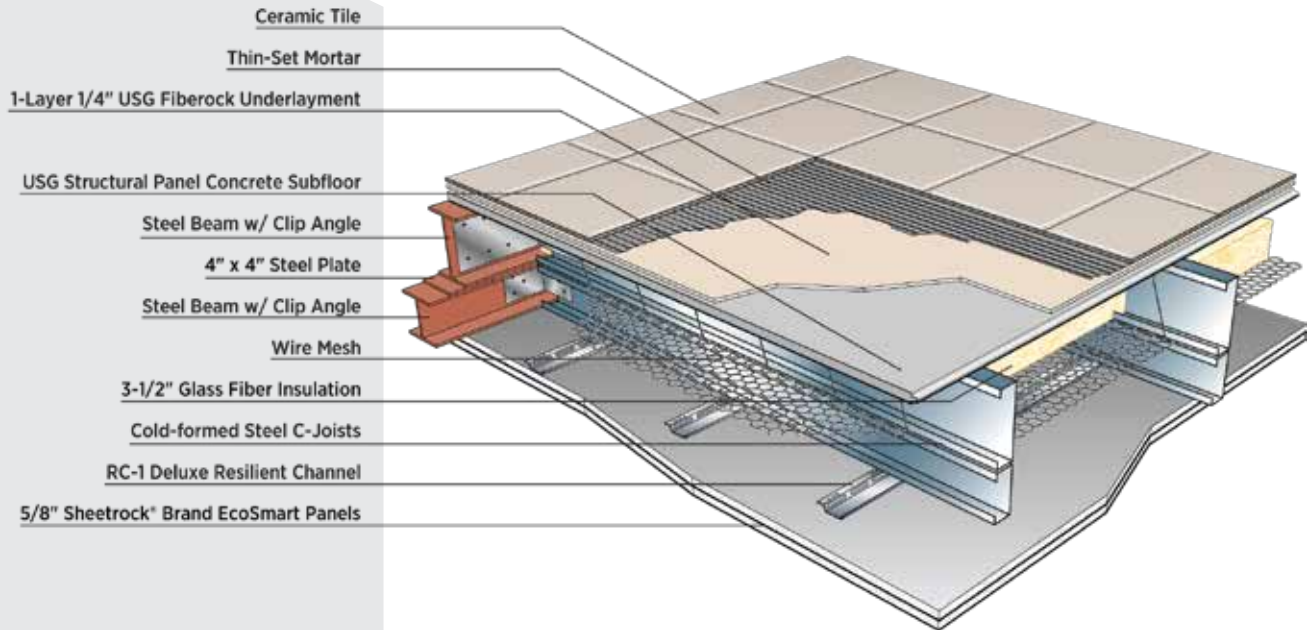
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12"x12" Ceramic Tile

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Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	61	55	K4505.50

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
- **C-joists**, min. 6" deep, min. 1-5/8" wide flanges, min. 68 mil. (14 gauge), spaced max. 24" o.c.
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CEILING FRAMING

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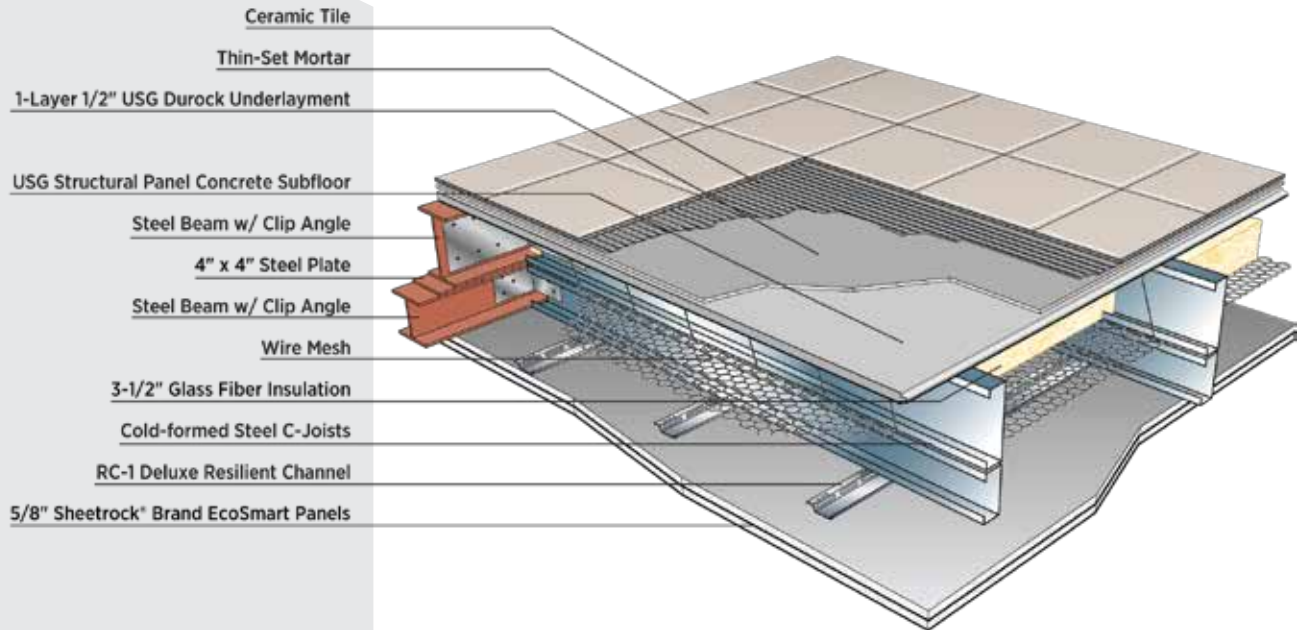
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Sound Isolation Material	STC	IIC	USG Design No.
No Sound Mat	61	57	K4505.49

FLOOR FRAMING

- **USG Structural Panel Concrete Subfloor** Subfloor fastened to cold-formed steel C-joists with 1-5/8" long, no. 8 self-drilling, self-countersinking steel flat head fasteners, spaced max. 8" o.c. at the perimeter and max. 12" o.c. in the field of the panel. See Progressive Engineering, Inc. code report PER-13067 (www.per13067.com), for recommended fasteners.
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