

USG
Performance
Flooring
Solutions

Safe and sound assemblies.

**USG LEVELROCK® BRAND
& USG DUROCK™ BRAND**

SOUND SYSTEMS
FIRE & SOUND RATING GUIDE

USG 
IT'S YOUR WORLD. BUILD IT.®

Specify safe and sound

Designing assemblies requires a balance between acoustic separation and fire protection – both elements are essential for occupant safety and comfort and to prevent owner and builder liability. Insulation thickness, placement in the cavity, and resilient channel spacing must all conform to the limits specified in the UL Design.


USG products and systems were the first to ensure that all sound systems are fire-rated and easily specified by a UL Design number. All USG 1- and 2-hour rated floor assemblies are designed to meet the current International Building Code (IBC) and feature USG Levelrock® Brand and USG Durock™ Brand underlayments and USG Levelrock® sound attenuation products. For uncompromised specifications, choose USG Performance Flooring Solutions.



UL Designs, Fire and Sound-Rated Assemblies


	Page
Open Web Wood Truss (1 Hour)	4
Open Web Wood Truss (2 Hour)	4
Engineered Wood I-Joist (1 Hour)	5
Dimensional Wood Joist (1 Hour)	6
Steel Joist (1 or 2 Hour)	7
Steel Truss (1 or 2 Hour)	7
6 in. (150 mm) Concrete (1 or 2 Hour)	7

Design for Fire and Sound

Floor System (Fire Rating)	UL Number	USG Levelrock® Sound Mat	USG Levelrock® USG Durock™ Underlayment ^(a)	Insulation	Framing Member Depth	RC Deluxe®	USG Sheetrock® Brand Firecode® C or X Gypsum Panels	Floor Covering	Sound Rating		Test Number	
									STC	IIC	STC	IIC
Open Web Wood Truss (1 Hour) 	L521	SAM-N12™ 1/8 in. (3 mm) mat	3/4 in. (19 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	12 in. (305 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	55		100528151CRT-002G	
	L528							sheet vinyl	50		100528151CRT-001L	
	L529							vinyl plank	51		100528151CRT-001M	
	L534							laminate	50		100528151CRT-001M	
	L542							eng. hardwood	51		100528151CRT-001M	
	L546							ceramic tile ^(b)	53		100528151CRT-001M	
	L550							carpet & pad	71		100528151CRT-001M	
	L558											
	L562											
	L563											
	L574	SAM-N25™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	63		USG090301A	
	L576							sheet vinyl	61		USG090401A	
	L585							laminate	62	53	USG090302A	USG090302A
	L592							ceramic tile ^(b)	64	54	USG090501A	USG090501A
	M503							carpet & pad	62	80	USG090402A	USG090402A
	M508	SAM-N25™ Ultra 5/16 in. (7.9 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	52			100528151CRT-001O
								sheet vinyl	54		100528151CRT-001O	
								vinyl plank	55		100528151CRT-001O	
								eng. hardwood	62	58	F6872.01-113-11-R0	F6872.01-113-11-R0
								carpet & pad	63	80	F6872.05-113-11-R0	F6872.05-113-11-R0
								vinyl plank	63	80	F6872.06-113-11-R0	F6872.06-113-11-R0
								sheet vinyl	63	58	F6872.02-113-11-R0	F6872.02-113-11-R0
								ceramic tile ^(b)	63	58	F6872.04-113-11-R0	F6872.04-113-11-R0
								ceramic tile ^(b)	63	59	F6872.07-113-11-R0	F6872.07-113-11-R0
		SAM-N40™ 3/8 in. (10 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	62	53	USG081101R	USG081101R
								sheet vinyl	62	55	USG081102R	USG081102R
								laminate	62	55	USG081104R	USG081104R
								ceramic tile ^(b)	62	56	USG090101R	USG090101R
								carpet & pad	61	80	USG081103R	USG081103R
		SAM-N75™ 3/4 in. (19 mm) mat	1-1/2 in. (38 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	63	57	F0778.07-113-11-r0	F0778.07-113-11-r0
								eng. hardwood	62	60	F0778.08-113-11-r0	F0778.08-113-11-r0
								carpet & pad	61	78	F0778.09-113-11-r0	F0778.09-113-11-r0
								vinyl plank	62	59	F0778.10-113-11-r0	F0778.10-113-11-r0
								cushioned vinyl	61	59	F0778.11-113-11-r0	F0778.11-113-11-r0
								ceramic tile ^(b)	61	60	F0778.12-113-11-r0	F0778.12-113-11-r0
		SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	12 in. (305 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	52			USG-031209
	sheet vinyl							62	53	RAL OT04-01	RAL OT04-02	
	cushioned vinyl							62	55	RAL OT04-03	RAL OT04-04	
	laminate							61	55	RAL OT04-07	RAL OT04-08	
	ceramic tile ^(b)							62	54	RAL OT04-11	RAL OT04-12	
	carpet & pad	62	81	RAL OT04-05	RAL OT04-06							
	none	3/4 in. (19 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	sheet vinyl	58	48	RAL TL97-340	RAL IN97-47	
							carpet & pad	76			RAL IN97-48	
Open Web Wood Truss (2 Hour)	M521	SAM-N40™ 3/8 in. (10 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	12 in. (305 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	none	55	53	101256027CRT-002a	101256027CRT-001a
								vinyl plank	56		101256027CRT-001b	
								ceramic tile ^(b)	54		101256027CRT-001d	
	none	1-1/2 in. (38 mm)	3-1/2 in. (89 mm) batt	18 in. (457 mm)	12 in. (305 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	carpet & pad	55	77	101256027CRT-002d	101256027CRT-001k	

NOTES

- (a) USG Levelrock and USG Durock™ floor underlayments have been tested with other sound mats. Contact USG for details.
- (b) Ceramic tile was tested with a crack isolation membrane.
- (c) Assembly includes sound mat that spans the fluted deck. There is no USG Levelrock® CSD® Early Exposure™ floor underlayment in the flutes.

Floor System (Fire Rating)	UL Number	USG Levelrock® Sound Mat	USG Levelrock® USG Durock™ Underlayment ^(a)	Insulation	Framing Member Depth	RC Deluxe®	USG Sheetrock® Brand Firecode® C or X Gypsum Panels	Floor Covering	Sound Rating		Test Number	
									STC	IIC	STC	IIC
 Engineered Wood I-Joist (1 Hour)	L570 L589 M502 M506	SAM-N12™ 1/8 in. (3 mm) mat	3/4 in. (19 mm)	3-1/2 in. (89 mm) batt	12 in. (305 mm)	16 in. (400 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	none	55		100528151CRT-002I	
								sheet vinyl	54		100528151CRT-001S	
								vinyl plank	53		100528151CRT-001T	
								eng. hardwood	56		100528151CRT-001R	
								ceramic tile ^(b)	54		100528151CRT-001V	
								carpet & pad	80		100528151CRT-001U	
		SAM-N25™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	9-1/2 in. (241 mm)	16 in. (400 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	none	53		3166866CRT-001C	
								sheet vinyl	50		3166866CRT-002C	
								laminate	53		3166866CRT-002C	
								ceramic tile ^(b)	53		3166866CRT-002C	
		SAM-N25™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	12 in. (305 mm)	16 in. (400 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	none	55		101647972CRT-001a	
								sheet vinyl	55		100452088CRT-001A	
								eng. hardwood	56		101647972CRT-001e	
								vinyl plank	52		100452088CRT-001A	
								ceramic tile ^(b)	53		100452088CRT-001A	
		SAM-N25™ Ultra 5/16 in. (7.9 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	11 7/8 in. (302 mm)	16 in. (400 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X	none	62	53	E6762.01-113-11-R0	E6762.01-113-11-R0
								vinyl plank	63	57	E6762.02-113-11-R0	E6762.02-113-11-R0
								eng. hardwood	62	60	E6762.03-113-11-R0	E6762.03-113-11-R0
								cushioned vinyl	62	58	E6762.04-113-11-R0	E6762.04-113-11-R0
								carpet & pad	62	76	E6762.05-113-11-R0	E6762.05-113-11-R0
								SAM-N40™ 3/8 in. (10 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	12 in. (305 mm)	16 in. (400 mm) o.c.
		eng. hardwood	57		101524621CRT-001e							
		vinyl plank	52		101524621CRT-001d							
		cushioned vinyl	54		101524621CRT-001c							
		sheet vinyl	53		101524621CRT-001b							
		ceramic tile ^(b)	53		101524621CRT-001f							
		SAM-N75™ 3/4 in. (19 mm) mat	1-1/2 in. (38 mm)	3-1/2 in. (89 mm) batt	11 7/8 in. (302 mm)	16 in. (400 mm) o.c.	2 layers 5/8 in. (15.9 mm) Firecode® X					
								eng. hardwood	61	59	F0780.02-11-11-R0	F0780.02-11-11-R0
carpet & pad	62							82	F0780.03-11-11-R0	F0780.03-11-11-R0		
vinyl plank	62							56	F0780.04-11-11-R0	F0780.04-11-11-R0		
cushioned vinyl	62							56	F0780.05-11-11-R0	F0780.05-11-11-R0		
ceramic tile ^(b)	62							58	F0780.06-11-11-R0	F0780.06-11-11-R0		
SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	9-1/2 in. (241 mm)	16 in. (400 mm) o.c.	2 layers 1/2 in. (12.7 mm) Firecode® C	sheet vinyl	64	58	RAL-OT03-05	RAL-OT03-06		
						laminate	64	62	RAL-OT03-07	RAL-OT03-08		
						ceramic tile ^(b)	66	54	RAL-OT03-09	RAL-OT03-10		
SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	14 in. (356 mm)	16 in. (400 mm) o.c. & GenieClip™	2 layers 1/2 in. (12.7 mm) Firecode® C	none	61	60	RAL-TL12-116	RAL-IN12-016		
						sheet vinyl		60		RAL-IN12-017		
						laminate		62		RAL-IN12-019		
						eng. hardwood		63		RAL-IN12-020		
						ceramic tile ^(b)		63		RAL-IN12-014		
none	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	14 in. (356 mm)	16 in. (400 mm) o.c.	2 layers 1/2 in. (12.7 mm) Firecode® C	carpet & pad	54	64	RAL-TL11-262	RAL-IN11-011		

NOTES

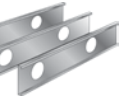

- (a) USG Levelrock and USG Durock™ floor underlayments have been tested with other sound mats. Contact USG for details.
- (b) Ceramic tile was tested with a crack isolation membrane.
- (c) Assembly includes sound mat that spans the fluted deck. There is no USG Levelrock® CSD® Early Exposure™ floor underlayment in the flutes.



Floor System (Fire Rating)	UL Number	USG Levelrock® Sound Mat	USG Levelrock® USG Durock™ Underlayment ^(a)	Insulation	Framing Member Depth	RC Deluxe®	USG Sheetrock® Brand Firecode® C or X Gypsum Panels	Floor Covering	Sound Rating		Test Number	
									STC	IIC	STC	IIC
Dimensional Wood Joist (1 Hour)	L502 L515 L533 L545 L569 L590	SAM-N12™ 1/8 in. (3 mm) mat	3/4 in. (19 mm)	3-1/2 in. (89 mm) batt	2 in. x 10 in. (51 mm x 254 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	53		10052815ICRT-002C	
								sheet vinyl	51		10052815ICRT-001CB	
								laminate	51		10052815ICRT-001CB	
								eng. hardwood	54		10052815ICRT-001CB	
								ceramic tile ^(b)	51		10052815ICRT-001CB	
								carpet & pad	75		10052815ICRT-001CB	
	SAM-N25™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	2 in. x 10 in. (51 mm x 254 mm)	24 in. (610 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	55	50	10052815ICRT-002A		10052815ICRT-001A
							sheet vinyl	54		10052815ICRT-001A		
							vinyl plank	54		10052815ICRT-001A		
							eng. hardwood	55		10052815ICRT-001A		
	SAM-N25™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	2 in. x 12 in. (51 mm x 305 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	53		3177964CRT-001AB		
							sheet vinyl	51		3177964CRT-002AB		
							laminate	55		3177964CRT-002AB		
							ceramic tile ^(b)	50		3177964CRT-002AB		
	SAM-N25™ Ultra 5/16 in. (7.9 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	2 in. x 10 in. (51 mm x 254 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	61		F6871.01-113-11-RO		
							ceramic tile ^(b)	62	53	F6871.07-113-11-RO		F6871.07-113-11-RO
	SAM-N40™ 3/8 in. (10 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	2 in. x 10 in. (51 mm x 254 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	59		F0779.01-113-11-RO		
							sheet vinyl	60	54	F0779.05-113-11-RO		10052815ICRT-001D
							vinyl plank	60	52	F0779.04-113-11-RO		F0779.04-113-11-RO
							laminate	57		10052815ICRT-001D		
							eng. hardwood	60	55	F0779.02-113-11-RO		F0779.02-113-11-RO
							ceramic tile ^(b)	61	55	F0779.06-113-11-RO		10052815ICRT-001D
							carpet & pad	60	78	F0779.03-113-11-RO		10052815ICRT-001D
	SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	2 in. x 10 in. (51 mm x 254 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	59		RAL-TL04-030		
							sheet vinyl	58	51	RAL-TL04-031		RAL-IN04-004
							cushioned vinyl	59	54	RAL-TL04-033		RAL-IN04-006
							laminate	58	55	RAL-TL04-034		RAL-IN04-007
ceramic tile ^(b)							59	52	RAL-TL04-067		RAL-IN04-009	
carpet & pad							59	77	RAL-TL04-032		RAL-IN04-005	

NOTES

- (a) USG Levelrock and USG Durock™ floor underlayments have been tested with other sound mats. Contact USG for details.
- (b) Ceramic tile was tested with a crack isolation membrane.
- (c) Assembly includes sound mat that spans the fluted deck. There is no USG Levelrock® CSD® Early Exposure™ floor underlayment in the flutes.

Floor System (Fire Rating)	UL Number	USG Levelrock® Sound Mat	USG Levelrock® USG Durock™ Underlayment ^(a)	Insulation	Framing Member Depth	RC Deluxe®	USG Sheetrock® Brand Firecode® C or X Gypsum Panels	Floor Covering	Sound Rating		Test Number		
									STC	IIC	STC	IIC	
 Steel Joist (1 or 2 Hour)	G551 G564 G591	SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	14 in. (356 mm)	USG Drywall Suspension System	1 layer 5/8 in. (15.9 mm) Firecode® C	sheet vinyl	64	55	RAL-OT05-09	RAL-OT05-10	
								laminate	63	58	RAL-OT05-13	RAL-OT05-14	
								ceramic tile ^(b)	65	51	RAL-OT05-15	RAL-OT05-16	
								carpet & pad	63	81	RAL-OT05-11	RAL-OT05-12	
	G559	SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	14 in. (356 mm)	USG Drywall Suspension System	1 layer 5/8 in. (15.9 mm) Firecode® C	none	60	42	E5121.01-113-11-RO	E5121.01-113-11-RO	
								vinyl plank	60	52	E5121.02-113-11-RO	E5121.02-113-11-RO	
								eng. hardwood	60	57	E5121.03-113-11-RO	E5121.03-113-11-RO	
								cushioned vinyl	60	56	E5121.04-113-11-RO	E5121.04-113-11-RO	
								carpet & pad	60	76	E5121.05-113-11-RO	E5121.05-113-11-RO	
	G559	SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	6-1/4 in. (159 mm) batt	9-1/4 in. (235 mm)	USG Drywall Suspension System	1 layer 5/8 in. (15.9 mm) Firecode® C	none	58		USG-041103		
								laminate	58	54	RAL-OT05-01	RAL-OT05-02	
								carpet & pad	58	79	RAL-OT04-23	RAL-OT04-24	
								none	62		USG-050104		
								laminate	62	58	RAL-OT05-05	RAL-OT05-06	
	 Steel Truss (1 or 2 Hour)	G564	SAM-N40™ 3/8 in. (10 mm) mat	1 in. (25.4 mm)	3-1/2 in. (89 mm) batt	12 in. (305 mm)	16 in. (400 mm) o.c.	1 layer 5/8 in. (15.9 mm) Firecode® C	none	62	51	F5761.01-113-11-RO	F5761.01-113-11-RO
									eng. hardwood	63	56	F5761.05-113-11-RO	F5761.05-113-11-RO
sheet vinyl									62	54	F5761.04-113-11-RO	F5761.04-113-11-RO	
vinyl plank									62	55	F5761.03-113-11-RO	F5761.03-113-11-RO	
carpet & pad									62	80	F5761.06-113-11-RO	F5761.06-113-11-RO	
ceramic tile ^(b)									63	57	F5761.07-113-11-RO	F5761.07-113-11-RO	
none									61	46	E2866.01-113-11-RO	E2866.01-113-11-RO	
eng. hardwood									61	57	E2866.02-113-11-RO	E2866.02-113-11-RO	
cushioned vinyl									61	56	E2866.03-113-11-RO	E2866.03-113-11-RO	
sheet vinyl									61	52	E2866.04-113-11-RO	E2866.04-113-11-RO	
vinyl plank	62	51	E2866.05-113-11-RO	E2866.05-113-11-RO									
carpet & pad	62	77	E2866.06-113-11-RO	E2866.06-113-11-RO									
ceramic tile ^(b)	61	55	E2866.07-113-11-RO	E2866.07-113-11-RO									
6 in. (150 mm) Concrete (1 or 2 Hour)	N/A	D20 PLUS™ <1/8 in. (<3 mm) mat	1/2 in. (12.7 mm)	none	6 in. (150 mm)	none	none	none	51	+20	NGC5008028	NGC7008068	
								sheet vinyl		+20		NGC7008072	
								laminate		+19		NGC7008070	
								ceramic tile ^(b)		+21		NGC7008079	
								none	50				
SRM-25™ Ready Seam™ 1/4 in. (6.4 mm) mat	1 in. (25.4 mm)	none	6 in. (150 mm)	none	none	none	none	50			RAL-IN03-008		
							sheet vinyl	56			RAL-TL03-176		
							laminate	54	50		RAL-TL03-177	RAL-IN03-007	
							ceramic tile ^(b)	56	51		RAL-TL03-210	RAL-IN03-010	
carpet & pad		77			RAL-IN03-009								
none	1 in. (25.4 mm)	none	6 in. (150 mm)	none	none	none	none	26			RAL-IN13-014		

NOTES

- (a) USG Levelrock and USG Durock™ floor underlayments have been tested with other sound mats. Contact USG for details.
- (b) Ceramic tile was tested with a crack isolation membrane.
- (c) Assembly includes sound mat that spans the fluted deck. There is no USG Levelrock® CSD® Early Exposure™ floor underlayment in the flutes.

PRODUCT INFORMATION

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

CUSTOMER SERVICE
800.USG.4YOU

LITERATURE
usg.com

USG/ALCORP TECHNICAL REPRESENTATIVES
pourlevelrock.com/contact

WEB SITES
usg.com
pourlevelrock.com
usgdesignstudio.com

NOTE

The information in this document is subject to change without notice. USG Corp. assumes no responsibility for any errors that may inadvertently appear in this document. Consult your USG Company sales office or representative for information.

NOTICE

We shall not be liable for incidental or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

IG1685-USA-ENG/rev. 8-16

© 2016 USG Corporation and/or its affiliates. All rights reserved. Printed in U.S.A.
The trademarks USG, CSD, D20 PLUS, DUROCK, EARLY EXPOSURE, FIRECODE, LEVELROCK, READY SEAM, SAM-CSD, SAM-N12, SAM-N25, SAM-N40, SHEETROCK, SRB, SRM-25, IT'S YOUR WORLD. BUILD IT., the USG logo, the design elements and colors and related marks are trademarks of USG Corporation or its affiliates.

GenieClip is a trademark of Pliteq, Inc.

RC Deluxe is a trademark of Clarkwestern Dietrich Building Systems, LLC.

USG products manufactured by or for
United States Gypsum Company
550 West Adams Street
Chicago, IL 60661

USG
IT'S YOUR WORLD. BUILD IT.®