



This section includes updated information, added since it was first published in December 2015.

Last updated 06/12/2019

C06. S05. P02 – P12

GypFloor SILENT

Including C06. S01. P02 – P08

Floors and ceilings introduction

Floors and ceilings

This section details floors and ceilings systems which cover a multitude of performance requirements in all sectors



Floors and ceilings

British Gypsum offers a full range of specifications from simple plasterboard ceilings through to a range of gypsum-based, acoustic suspended ceilings and lay-in grid systems. They cover all building categories, including private and social housing, apartments, healthcare, educational facilities, recreational and industrial properties in both new-build and refurbishment and can satisfy the most demanding performance requirements.

When specifying floor and ceiling solutions, a number of performance characteristics are normally used to determine the required solution. Depending on the project or construction type, these performance parameters could be set by minimum regulatory standards, or a client or customer requirement, for buildings that offer the highest standards of performance and comfort.

Our quick-reference floors and ceilings system guide, below, allows you to simply select the performance categories of interest and identify the British Gypsum floor and ceiling systems which best satisfy your project requirements.

 Fire performance mins	Installed cavity depth mm	 Acoustic performance				System	Page
		R_w dB	$R_w + C_{tr}$ dB	$L_{n,w}$ dB	α_w		
30 - 120	≥100	56 - 66	50 - 55	68 - 50	0.35 - 0.85	CasoLine MF	C06. S02. P02
-	≥100	-	-	-	0.35 - 0.85 ²	CasoLine CURVE	C06. S03. P02
30 - 90	25 - 175	52 - 63	50	66 - 55	0.35 - 0.85	GypLyner UNIVERSAL	C06. S04. P02
30 - 90	-	54 - 63	47 - 51	63 - 55	-	GypFloor SILENT ¹	C06. S05. P02
30 - 120	-	36 - 66	50 - 55	78 - 48	-	Timber floors	C06. S06. P02
30 - 60	-	-	-	-	-	Cavity barriers	C06. S07. P02

¹ Where the floor can only be accessed from above, the fire and acoustic performances can be upgraded with the GypFloor SILENT system.

² Indicative first test performance only.

Acoustic performance

Table 1 – Recommended laboratory performance to meet requirements of Building Regulations Approved Document E (England and Wales)

Where applicable	Minimum airborne sound insulation $D_{nT,w} + C_{tr}$ (site test result)	Recommended performance $R_w + C_{tr}$ (laboratory test result)	Maximum impact sound transmission $L'_{nT,w}$ (site test result)	Recommended performance $L_{n,w}$ (laboratory test result)
Separating walls between new homes	45dB	54dB	-	-
Separating walls between purpose-built rooms for residential purposes	43dB	52dB	-	-
Separating walls between rooms created by a change of use or conversion	43dB	52dB	-	-
Separating floors between new homes and purpose-built rooms for residential purposes	45dB	54dB	62dB	57dB - 52dB (depending on construction method)
Separating floors between rooms created by a change of use or conversion	43dB	52dB	64dB	59dB - 54dB (depending on construction method)

Table 2 – Recommended laboratory performance to meet requirements of Technical Handbook Section 5 (Scotland)

Where applicable	Minimum airborne sound insulation $D_{nT,w}$ (site test result)	Recommended performance R_w (laboratory test result)	Maximum impact sound transmission $L'_{nT,w}$ (site test result)	Recommended performance $L_{n,w}$ (laboratory test result)
Separating walls between new homes, purpose-built rooms for residential purposes and conversions (not including traditional buildings ¹)	56dB	63dB	-	-
Separating walls between rooms created by a change of use or conversion (traditional buildings ¹)	53dB	60dB	-	-
Separating floors between new homes, purpose-built rooms for residential purposes and conversions (not including traditional buildings ¹)	56dB	63dB	56dB	51dB - 46dB (depending on construction method)
Separating floors between rooms created by a change of use or conversion (traditional buildings ¹)	53dB	60dB	58dB	53dB - 48dB (depending on construction method)

¹ Definition of traditional buildings.

A building or part of a building of a type constructed before or around 1919:

- a) using construction techniques that were commonly in use before 1919; and
- b) with permeable components, in a way that promotes the dissipation of moisture from the building fabric.

Good practice specification guidance

British Gypsum's systems are designed and tested to meet every performance requirement and are fully supported by our SpecSure® lifetime system warranty.

This means that when our systems are installed following our guidance they will achieve every performance claim we make, and if they don't then we'll put it right. To maximise the performance achieved on site, consider the following good practice specification guidance:

- Consider flanking transmission at the design stage and ensure construction detailing is specified to eliminate, or at least to minimise, any downgrading of the acoustic performance. The sound insulation values quoted in system performance tables are laboratory values and the practicalities of construction will mean that acoustic performances measured in the laboratory will be difficult to achieve on site

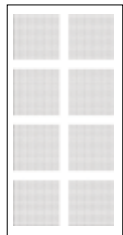


- Small openings such as gaps, cracks or holes will conduct airborne sounds and can significantly reduce the sound insulation of a construction. For optimum sound insulation a construction must be airtight
- When designing spaces requiring separation by sound insulating floors and ceilings abutting structural steelwork, consideration should be given to the potential loss of sound insulation performance through the steelwork

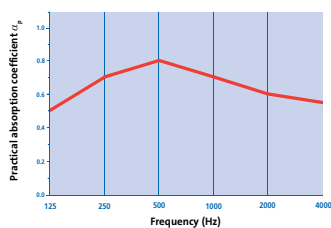
Gyptone performance

Table 3 – Sound absorption data for Gyptone boards

QUATTRO 41



Sound absorption coefficient α_p



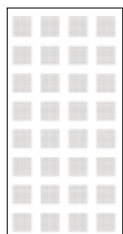
System reference  C10A091

 Gyptone QUATTRO 41 (plenum depth 187mm)

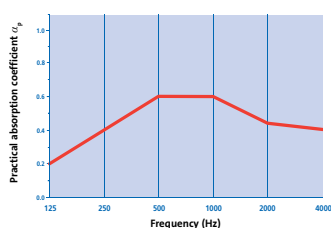
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.50	0.70	0.80	0.70	0.60	0.55	0.65	C	0.70

QUATTRO 42



Sound absorption coefficient α_p



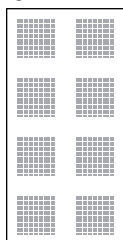
System reference  C10A110

 Gyptone QUATTRO 42 (plenum depth 50mm)³

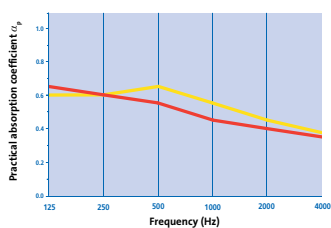
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.20	0.40	0.60	0.60	0.45	0.40	0.50	D	0.55

QUATTRO 46



Sound absorption coefficient α_p



System reference  C10A014
 C10A015

 Gyptone QUATTRO 46 (plenum depth 400mm)

 Gyptone QUATTRO 46 (plenum depth 400mm plus 100mm Isover Spacesaver Ready-Cut)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.65	0.60	0.55	0.45	0.40	0.35	0.45(L)	D	0.50
0.60	0.60	0.65	0.55	0.45	0.40	0.50(L)	D	0.55

¹ AC - Absorption Class.

² NRC - Noise Reduction Coefficient.

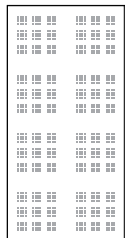
³ Due to installation limitations the minimum cavity size that can be constructed with CasoLine **mf** or CasoLine **curve** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

(NB) All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

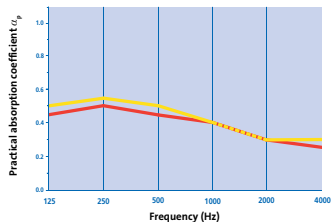
Gyptone performance (continued)

Table 3 (continued) – Sound absorption data for Gyptone boards

QUATTRO 47



Sound absorption coefficient α_p



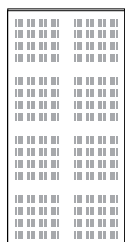
System reference ■ C10A016
■ C10A017

■ Gyptone **QUATTRO 47** (plenum depth 400mm)
■ Gyptone **QUATTRO 47** (plenum depth 400mm plus 50mm Isover Acoustic Partition Roll (APR 1200))

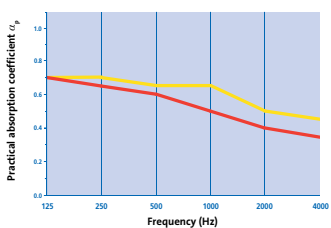
Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.45	0.50	0.45	0.40	0.30	0.25	0.35(L)	D	0.40
■	0.50	0.55	0.50	0.40	0.30	0.30	0.40(L)	D	0.45

LINE 6



Sound absorption coefficient α_p



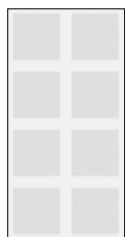
System reference ■ C10A001
■ C10A002

■ Gyptone **LINE 6** (plenum depth 400mm)
■ Gyptone **LINE 6** (plenum depth 400mm plus 100mm Isover Spacesaver Ready-Cut)

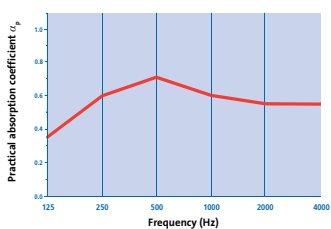
Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.70	0.65	0.60	0.50	0.40	0.35	0.45(L)	D	0.55
■	0.70	0.70	0.65	0.65	0.50	0.45	0.55(L)	D	0.65

SIXTO 63



Sound absorption coefficient α_p



System reference ■ C10A115

■ Gyptone **SIXTO 63** (plenum depth 200mm)

Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.35	0.60	0.70	0.60	0.55	0.55	0.60	C	0.60

¹ AC - Absorption Class.

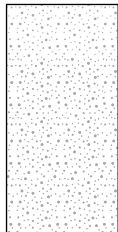
² NRC - Noise Reduction Coefficient.

(NB) All products have been tested to *BS EN 20354* and *ISO 354*. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with *EN ISO 11654*. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

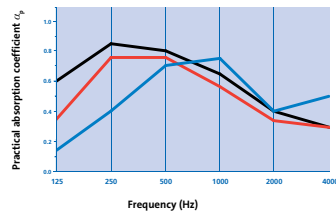
Rigitone performance

Table 4 – Sound absorption data for Rigitone boards

8-15-20 SUPER



Sound absorption coefficient α_p



System reference

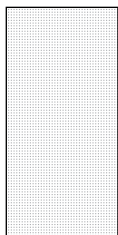
- C10A058
- C10A059
- C10A069

■ Rigitone 8-15-20 SUPER (plenum depth 50mm)³
■ Rigitone 8-15-20 SUPER (plenum depth 200mm)
■ Rigitone 8-15-20 SUPER (plenum depth 200mm plus 50mm Isover Frame Batt 32)

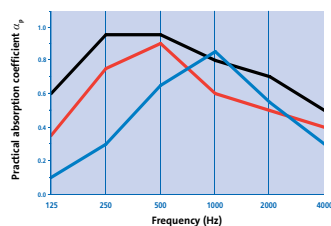
Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.15	0.40	0.70	0.75	0.45	0.40	0.50(M)	D	0.55
■	0.35	0.75	0.75	0.55	0.40	0.30	0.45(LM)	D	0.60
■	0.60	0.85	0.80	0.65	0.45	0.30	0.45(LM)	D	0.70

8/18



Sound absorption coefficient α_p



System reference

- C10A036
- C10A037
- C10A060

■ Rigitone 8/18 (plenum depth 50mm)³
■ Rigitone 8/18 (plenum depth 200mm)
■ Rigitone 8/18 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

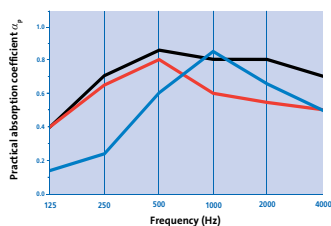
Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.10	0.30	0.65	0.85	0.55	0.30	0.50(M)	D	0.55
■	0.35	0.75	0.90	0.60	0.50	0.40	0.55(LM)	D	0.70
■	0.60	0.95	0.95	0.80	0.70	0.50	0.70(LM)	C	0.85

8/18 Q



Sound absorption coefficient α_p



System reference

- C10A125
- C10A124
- C10A126

■ Rigitone 8/18 Q (plenum depth 50mm)³
■ Rigitone 8/18 Q (plenum depth 200mm)
■ Rigitone 8/18 Q (plenum depth 200mm plus 25mm Isover Acoustic Partition Roll (APR 1200))

Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
■	0.15	0.25	0.60	0.85	0.65	0.50	0.55(M)	D	0.60
■	0.40	0.65	0.80	0.60	0.55	0.50	0.60	C	0.65
■	0.40	0.70	0.85	0.80	0.80	0.70	0.80	B	0.80

¹ AC - Absorption Class.

² NRC - Noise Reduction Coefficient.

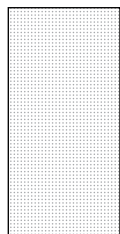
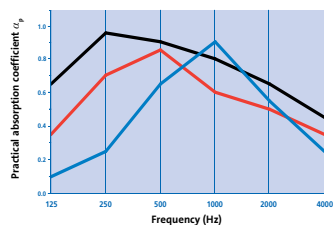
³ Due to installation limitations the minimum cavity size that can be constructed with CasoLine MF or CasoLine CURVE system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

(NB) All products have been tested to BS EN 20354 and ISO 354. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with EN ISO 11654. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

Rigitone performance (continued)

Table 4 (continued) - Sound absorption data for Rigitone boards

10/23

Sound absorption coefficient α_p 

System reference

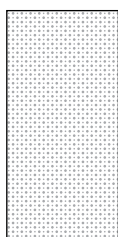
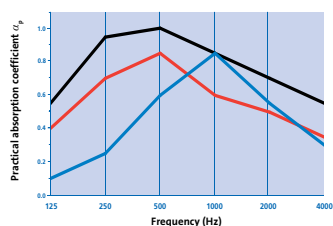
- C10A038
- C10A039
- C10A061

- Rigitone 10/23 (plenum depth 50mm)³
- Rigitone 10/23 (plenum depth 200mm)
- Rigitone 10/23 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.10	0.25	0.65	0.90	0.55	0.25	0.45(M)	D	0.60
0.35	0.70	0.85	0.60	0.50	0.35	0.50(LM)	D	0.65
0.65	0.95	0.90	0.80	0.65	0.45	0.65(LM)	C	0.80

12-20/66

Sound absorption coefficient α_p 

System reference

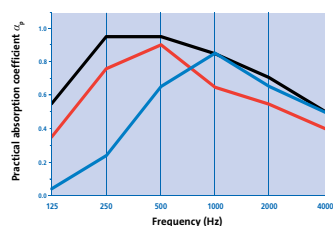
- C10A042
- C10A043
- C10A063

- Rigitone 12-20/66 (plenum depth 50mm)³
- Rigitone 12-20/66 (plenum depth 200mm)
- Rigitone 12-20/66 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.10	0.25	0.60	0.85	0.55	0.30	0.45(M)	D	0.55
0.40	0.70	0.85	0.60	0.50	0.35	0.50(LM)	D	0.65
0.55	0.95	1.00	0.85	0.70	0.55	0.70(LM)	C	0.90

12/25

Sound absorption coefficient α_p 

System reference

- C10A127
- C10A129
- C10A128

- Rigitone 12/25 (plenum depth 50mm)³
- Rigitone 12/25 (plenum depth 200mm)
- Rigitone 12/25 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.05	0.25	0.65	0.85	0.65	0.50	0.55(M)	D	0.60
0.35	0.75	0.90	0.65	0.55	0.40	0.55(LM)	D	0.70
0.55	0.95	0.95	0.85	0.70	0.50	0.70(LM)	C	0.85

¹ AC – Absorption Class.² NRC – Noise Reduction Coefficient.³ Due to installation limitations the minimum cavity size that can be constructed with CasoLine **MF** or CasoLine **CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.**(NB)** All products have been tested to *BS EN 20354* and *ISO 354*. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with *EN ISO 11654*. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

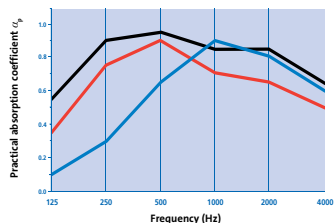
Rigitone performance (continued)

Table 4 (continued) – Sound absorption data for Rigitone boards

12/25 Q



Sound absorption coefficient α_p



System reference

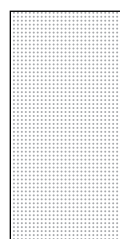
- C10A131
- C10A130
- C10A132

- Rigitone 12/25 Q (plenum depth 50mm)³
- Rigitone 12/25 Q (plenum depth 200mm)
- Rigitone 12/25 Q (plenum depth 200mm plus 50mm Isover Frame Batt 32)

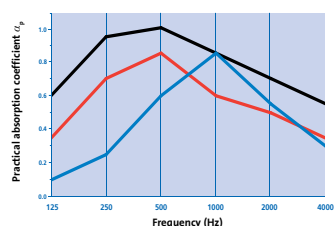
Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.10	0.30	0.65	0.90	0.80	0.60	0.60(M)	C	0.65
0.35	0.75	0.90	0.70	0.65	0.50	0.65(LM)	C	0.75
0.55	0.90	0.95	0.85	0.85	0.65	0.85(L)	B	0.90

15/30



Sound absorption coefficient α_p



System reference

- C10A040
- C10A041
- C10A062

- Rigitone 15/30 (plenum depth 50mm)³
- Rigitone 15/30 (plenum depth 200mm)
- Rigitone 15/30 (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

125	250	500	1k	2k	4k	α_w	AC ¹	NRC ²
0.10	0.25	0.60	0.85	0.55	0.30	0.45(M)	D	0.55
0.35	0.70	0.85	0.60	0.50	0.35	0.50(LM)	D	0.65
0.60	0.95	1.00	0.85	0.70	0.55	0.70(LM)	C	0.85

¹ AC – Absorption Class.

² NRC – Noise Reduction Coefficient.

³ Due to installation limitations the minimum cavity size that can be constructed with **CasoLine MF** or **CasoLine CURVE** system is 100mm. The sound absorption performance for these systems is estimated to be equivalent to that of the same system built with a 50mm plenum.

(NB) All products have been tested to *BS EN 20354* and *ISO 354*. The single figure rating practical sound absorption coefficient α_w is calculated in accordance with *EN ISO 11654*. Suffix letters indicate where performance is limited at either low, medium or high frequencies.

GypFloor SILENT

Sound insulating floor system



All our systems are covered by SpecSure® when using genuine British Gypsum and Saint-Gobain Isover products



GypFloor SILENT

GypFloor SILENT is an acoustic floor system, specified in residential conversion or improvement work. It upgrades existing timber joist floors to meet the requirements of Building Regulations for separating floors between rooms created by a change of use or conversion.

GypFloor SILENT can also be used in new-build homes for enhanced sound insulation performance of internal floors.

Key benefits

- Provides a significant uplift in acoustic performance making it an ideal upgrade for transforming a non-performing floor to one that is Building Regulations compliant
- Adds only 7mm to the existing floor height, minimising the impact on existing fixtures and fittings compared to alternative solutions, such as floating floor systems
- The transfer of impact noise through floor structure to the room below, for example impact noise from footfall or furniture movement, is reduced due to the integral neoprene strip located within Gypframe SIF Floor Channels
- Acoustic performance of the floor is further enhanced by installing Gypframe RB1 Resilient Bar to isolate the ceiling lining from the joists
- An existing structure can be improved, in terms of both fire and acoustic performance, without requiring extensive alteration, even where access is available from above only



30

—

90

mins



54

—

63

R_w dB

63

—

55

$L_{n,w}$ dB

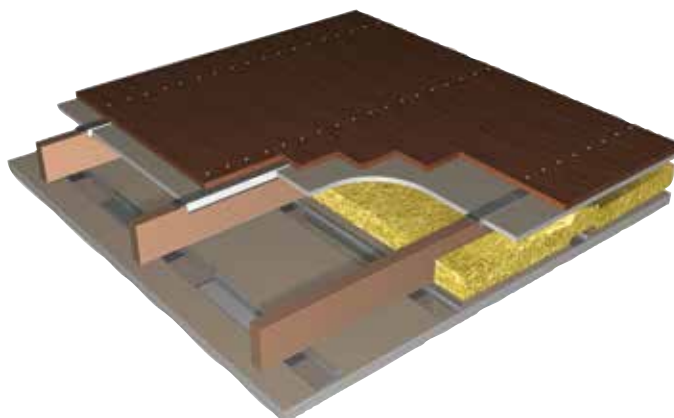


System can be skim finished with ThistlePro PureFinish. Refer to C02. S01. P49

SPECURE

Lifetime System Warranty

Refer to C01. S01. P07



GypFloor SILENT performance

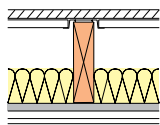
Ceiling installed to existing solid timber joists

For details of when
to specify fire
resistance using EN
▶ Refer to C02. S01. P05



Table 1a – Solutions to satisfy requirements of BS EN 1365-2

1



GypFloor SILENT comprising Gyproc Plank on Gyproframe SIF Floor Channel located over timber joists (minimum 195mm deep at 450mm / 600mm centres). Walking surface of chipboard or softwood t&g flooring (21mm minimum). 100mm Isover Spacesaver Ready-Cut in the cavity. Gyproframe RB1 Resilient Bars fixed at 450mm centres. Ceiling linings as in table.

Detail	Ceiling lining	Ceiling depth mm	Board type	Lining thickness mm	Sound insulation		System reference
					Airborne $R_w (R_w + C_{tr})$ dB	Impact $L_{n,w}$ dB	
60 minutes fire resistance 							
	Gypframe RB1 Resilient Bar	46	Gyproc SoundBloc	2 x 15	61 (48)	56	C204006
	Gypframe RB1 Resilient Bar	47.5	Gyproc Plank + Gyproc FireLine	1 x 19 + 1 x 12.5	63 (51) ¹	55	C204003

▶ For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

¹ This British Gypsum Approved System is designed to achieve minimum $D_{nT,w} + C_{tr}$ 43dB and $L'_{nT,w}$ 64dB subject to Pre-Completion Testing. Refer to C06. S01. P03 – Floors and ceilings introduction, table 1.

NB The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum and Saint-Gobain Isover components are used throughout, and the company's fixing recommendations are strictly observed. Any variation in the specification should be checked with British Gypsum.

GypFloor SILENT performance (continued)

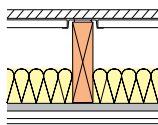
Ceiling installed to existing solid timber joists

For details of when
to specify fire
resistance using BS
▶ Refer to C02. S01. P05



Table 1b – Solutions to satisfy requirements of BS 476: Part 21: 1987

①



GypFloor SILENT comprising Gyproc Plank on Gypframe SIF Floor Channel located over timber joists (minimum 195mm x 45mm joists at 450mm centres). Walking surface of chipboard or softwood square edged flooring (21mm minimum). 100mm Isover Spacesaver Ready-Cut in the cavity. British Gypsum ceiling installed to the underside of joists with bars / channels spaced at 450mm centres. Ceiling linings as in table.

Detail	Ceiling lining	Ceiling depth mm	Board type	Lining thickness mm	Sound insulation		System reference
					Airborne $R_w (R_w + C_{tr})$ dB	Impact $L_{n,w}$ dB	
60 minutes fire resistance BS							
1	Gypframe RB1 Resilient Bar	46	Gyproc SoundBloc	2 x 15	61 (48)	56	C204006
1	Gypframe RB1 Resilient Bar	47.5	Gyproc Plank + Gyproc SoundBloc	1 x 19 + 1 x 12.5	63 (51) ¹	55	C204001
1	Gyplyner UNIVERSAL	91.5	Gyproc Plank + Gyproc SoundBloc	1 x 19 + 1 x 12.5	63 (50)	55	C154008
90 minutes fire resistance BS							
1	Gypframe RB1 Resilient Bar	46	Gyproc FireLine	2 x 15	60 (47)	57	C204002

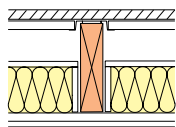
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¹ This British Gypsum Approved System is designed to achieve minimum $D_{nT,w} + C_{tr}$ 43dB and $L'_{nT,w}$ 64dB subject to Pre-Completion Testing. Refer to C06. S01. P03 – Floors and ceilings introduction, table 1.

(NB) The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum and Saint-Gobain Isover components are used throughout, and the company's fixing recommendations are strictly observed. Any variation in the specification should be checked with British Gypsum.

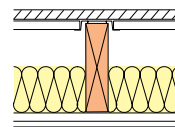
Table 2 — Solutions to satisfy requirements of BS 476: Part 21: 1987

①



GypFloor SILENT comprising Gyproc Plank on Gypframe SIF Floor Channel located over timber joists. Walking surface of chipboard or softwood flooring (21mm minimum t&g). Cavity bridged between joists (minimum joist width 50mm) by 12.5mm Glasroc F MULTIBOARD resting on 100mm x 12.5mm Glasroc F MULTIBOARD strips (screw-fixed to joists flush with bottom edge, at 300mm centres). 100mm Isover Spacesaver Ready-Cut in the cavity. Existing ceiling linings as in table.

②



GypFloor SILENT comprising Gyproc Plank on Gypframe SIF Floor Channel located over timber joists. Walking surface of chipboard or softwood flooring (21mm minimum square edge). 100mm Isover Spacesaver Ready-Cut in the cavity. Ceiling linings as in table.

Detail	Ceiling lining	Ceiling depth mm	Lining thickness mm	Sound insulation		System reference
				Airborne R_w dB	Impact $L_{n,w}$ dB	
30 minutes fire resistance BS						
2	Gyproc Plank + Gyproc WallBoard	31.5	1 x 19 + 1 x 12.5	54	63	C204004
2	Existing plasterboard + Gyproc SoundBloc overboarding	25	1 x 12.5 + 1 x 12.5	54	63	C204005
60 minutes fire resistance BS						
1	Gyproc Plank + Gyproc WallBoard ^{1 2}	31.5	1 x 19 + 1 x 12.5	54	63	G104032
2	Existing plasterboard + Gyproc FireLine overboarding	27.5	1 x 12.5 + 1 x 15	54	63	C204007

► For further assistance in choosing the right solution for your project, try the White Book System Selector; an online tool that enables quick and easy filtering by performance criteria. It provides system specific information downloads including BIM (Revit) objects. Go to british-gypsum.com

¹ Linings used in acoustic tests to simulate a lath and plaster ceiling in good condition.

² The performance was achieved with t&g flooring. For non t&g floors, overlay with 6mm plywood and ensure all joints are staggered.

(NB) The fire resistance and sound insulation performances are for imperforate partitions, walls and ceilings incorporating boards with all joints taped and filled, or skimmed according to British Gypsum's recommendations. The quoted performances are achieved only if British Gypsum and Saint-Gobain Isover components are used throughout, and the company's fixing recommendations are strictly observed. Any variation in the specification should be checked with British Gypsum.

(NB) For non t&g floors, overlay with 6mm plywood and ensure all joints are staggered.

GypFloor SILENT design

Building design

GypFloor SILENT comprises Gypframe SIF Floor Channels positioned on the upper surface of the timber joists and Gypframe RB1 Resilient Bars fixed to the under side of the timber joists.

Planning – key factors

The GypFloor SILENT system adds 7mm to the level of the top of the joists. The finished surface of the applied ceiling linings will be 16mm plus the thickness of the lining boards from the underside of the joists when Gypframe RB1 Resilient Bar is used. Ceiling linings should be fixed prior to any installation of drylining or plastering on walls. If this is not possible, ceiling linings should neatly abut the wall.

In refurbishment work the level of existing joists should be checked. Their upper surfaces should be reasonably level and straight for the flooring application. If there is misalignment of their lower surfaces, consideration should be given to using a Gyplyner UNIVERSAL or CasoLine MF suspended ceiling to support the ceiling boards.

Structural

The system is primarily intended for timber floors with an intensity of distributed load of up to 5.0kN/m², and a point load of 4.5kN. An increase in the mass of the floor will result from upgrading. The load capacity of the supporting floor joists should therefore be checked, with due consideration to the effects of lateral buckling and the need for intermediate restraints. This may be particularly important where the system is to be used in conjunction with engineered timber 'T' joists.

Flanking transmission

Care should be taken to ensure that the associated structure is suitable to achieve the level of sound insulation required. Particular reference to Building Regulations Approved Document E should be made as regards the use of this floor type and the requirements of the surrounding structure. Where the walls supporting the floor weigh less than 365kg/m² the use of an acoustic shield lining to the walls should be considered. Flanking detail specifications are given in the current HomeSpec, The White Book Residential Sector Guide, available to download from british-gypsum.com

Existing plaster and lath ceilings

In order to ensure the required fire resistance of a floor is achieved, it is recommended to under-draw the lath and plaster with chicken wire (fixed in accordance with manufacturer recommendations). A cavity should then be formed with minimum 38 x 38mm timber battens or Gyplyner UNIVERSAL.

Services

The installation of services within the floor zone should be carried out to allow easy access from above and should, where possible, follow the line of the floor joists.

Board finish

► Refer to C08. S01. P02 – Finishes.



Handy hint

Gypframe SIF Floor Channels can accommodate a wide range of joist widths:

- Gypframe SIF1 Floor Channel for joists ≤63mm
- Gypframe SIF4 Floor Channel for joists 64 - 75mm
- Gypframe SIF2 Floor Channel for joists ≥75mm

NB Ensure that channels are never fixed to the joist.

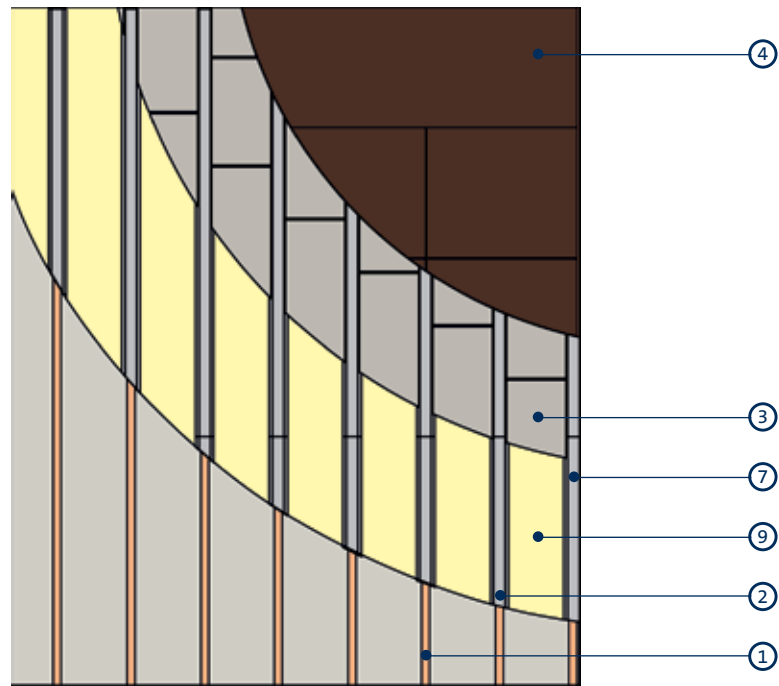


SpecSure®

All our systems are covered by SpecSure® when using genuine British Gypsum and Saint-Gobain Isover products.

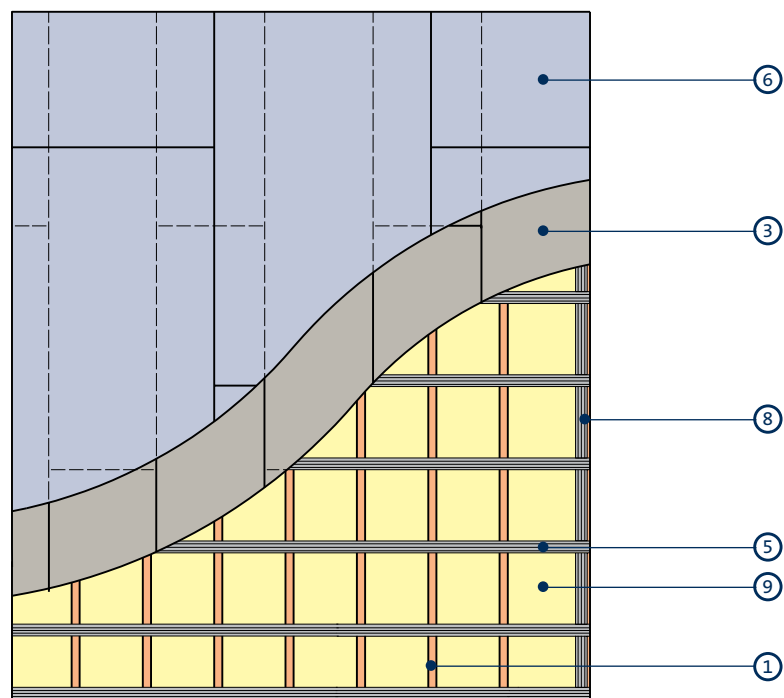
GypFloor SILENT construction details

1



Cut-away floor plan (Chipboard flooring)

2



Reflected ceiling plan (12.5mm x 1200mm x 2700mm Gyproc SoundBloc over Gyproc Plank fixed to Gypframe RB1 Resilient Bars)

- 1 Solid timber joists
- 2 Gypframe SIF Floor Channels
- 3 Gyproc Plank
- 4 Chipboard flooring
- 5 Gypframe RB1 Resilient Bar

- 6 Gyproc SoundBloc
- 7 Gypframe SIF2 Floor Channel
- 8 Gypframe RB1 Resilient Bar noggings at room perimeter
- 9 Isover Spacesaver Ready-Cut

GypFloor SILENT system components

Gypframe metal components (▶ Refer to C10. S02. P02 for details)



Gypframe SIF1 Floor Channel

Channel, with integral acoustic isolator, laid on top of timber joists less than or equal to 63mm wide to support Gyproc Plank.



Gypframe SIF2 Floor Channel

Channel, with integral acoustic isolator, laid on top of timber joists greater than 75mm wide to support Gyproc Plank. Also used around perimeter.



Gypframe SIF4 Floor Channel

Channel, with integral acoustic isolator, laid on top of timber joists between 64mm and 75mm wide to support Gyproc Plank.



Gypframe RB1 Resilient Bar

Acoustically engineered channel to separate board fixing from the timber joist and to overcome nail popping. Fixed to underside of joists.

Board products (▶ Refer to C10. S03. P02 for details)



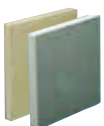
Gyproc WallBoard¹

Standard gypsum plasterboard.



Gyproc FireLine¹

Gypsum plasterboard with fire resistant additives.



Gyproc Plank

Standard gypsum plasterboard located as an inner layer and / or located within Gypframe floor channels.



Glasroc F MULTIBOARD

Non-combustible glass-reinforced gypsum board.



Gyproc SoundBloc¹

Gypsum plasterboard with a high density core for enhanced sound insulation performance.

¹ Also available in Moisture Resistant (MR) version. MR boards are specified in intermittent wet use areas.

Fixing products (▶ Refer to C10. S04. P02 for details)



British Gypsum Drywall Screws

Corrosion resistant self-tapping steel screws for fixing board-to-timber and board-to-metal framing less than 0.8mm thick.



GypFloor SIF5 Floor Screws

For fixing floorboards through Gyproc Plank into the Gypframe Floor Channel flange.



British Gypsum Collated Drywall Screws

Corrosion resistant self-tapping steel screws for fixing board-to-timber and board-to-metal framing less than 0.8mm thick.

GypFloor SILENT system components (continued)

Plasterboard accessories (► Refer to C10. S05. P02 for details)



Gyproc Jointing Material

Jointing compounds, ready mixes and adhesives for reinforcement and finishing of board joints. Primers and sealers for treatment of boards for pre-decoration.



Gyproc Drywall Primer

A general purpose plasterboard primer, providing an ideal surface for decoration for most paints and wall coverings.



Gyproc Sealant

Used to seal air paths for optimum sound insulation.



Gyproc Drywall Sealer

A specially formulated sealer providing vapour control and a superior finish. Suitable for decoration with most paints and wall coverings.



Gyproc edge and angle beads

Protecting and enhancing board edges and corners.



Gyproc Joint Tape

A paper tape designed for reinforcement of flat joints or internal angles.

Finishing products (► Refer to C10. S06. P02 for details)



Thistle MultiFinish

To provide a plaster skim finish on most common backgrounds including undercoat plasters and plasterboard.



ThistlePro PureFinish

To provide a plaster skim finish with **ACTIVair** technology. Used to finish most common backgrounds including undercoat plasters and plasterboard. For more information refer to C02. S01. P49.



Thistle BoardFinish

To provide a plaster skim finish to Gyproc plasterboards.



Plaster accessories

Designed for the reinforcement and finishing of board joints before plaster skimming.



Thistle ProTape FT50

Self-adhesive 48mm wide glass fibre mesh tape.



Thistle ProTape FT100

Self-adhesive 100mm wide glass fibre mesh tape.

Insulation products (► Refer to C10. S09. P04 for details)



Isover Spacesaver Ready-Cut

Glass mineral wool for enhanced acoustic and thermal performance.

GypFloor SILENT installation overview

This is intended to be a basic description of how the system is built.
For detailed installation guidance refer to the **British Gypsum Site Book**.



Gypframe SIF Floor Channels are located centrally over the joists. They must not be fixed to the joists.



Gyproc Plank is cut neatly to fit between the channels.



Flooring is laid across the Gypframe SIF Floor Channels and screw-fixed through the Gyproc Plank to the channel flange on one side only, using Gypframe SIF5 Floor Screws. It is important to ensure that no fixings are allowed to connect the Gypframe SIF Floor Channels to the joists.



Gypframe RB1 Resilient Bars are installed to the underside of the joists with British Gypsum Drywall Screws.



100mm Isover Spacesaver Ready-Cut is laid between joists to rest on the Gypframe RB1 Resilient Bars. The specified ceiling boards are then screw fixed to the Gypframe RB1 Resilient Bars with the correct length British Gypsum Drywall Screws to ensure the screws do not contact the timber joists.



Additional information

For full installation details, refer to the **British Gypsum Site Book**, available to download from british-gypsum.com

