The Building Test Centre
Fire Acoustics Structures

The Building Test Centre
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CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-2:2016

Sponsor:	**British Gypsum** East Leake Loughborough Leicestershire LE12 6HX
Prepared by:	**The Building Test Centre** East Leake Loughborough Leicestershire LE12 6NP www.btconline.co.uk
Product name:	GYPWALL METAL STUD PARTITION WITH 48 MM STUD FRAMEWORK CLAD EACH SIDE WITH A DOUBLE LAYER OF 12.5 MM GYPROC WALLBOARD 12.5MM WITH 25 MM ISOVER APR 1200 IN THE CAVITY
Classification report No:	BTC 22660FC
Issue number:	One
Date of issue:	19th June 2023

This classification report consists of 7 pages and may only be reproduced in its entirety.

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1. Introduction

This classification report defines the classification assigned to element GypWall metal stud partition with 48 mm stud framework clad each side with a double layer of 12.5 mm Gyproc WallBoard 12.5mm with 25 mm Isover APR 1200 in the cavity, in accordance with the procedures given in BS EN 13501-2:2016.

2. Details of Classified Product

2.1 Product Description

The element, GypWall metal stud partition with 48 mm stud framework clad each side with a double layer of 12.5 mm Gyproc WallBoard 12.5mm with 25 mm Isover APR 1200 in the cavity fully described below, is provided in support of the classification, listed in Clause 3.1.

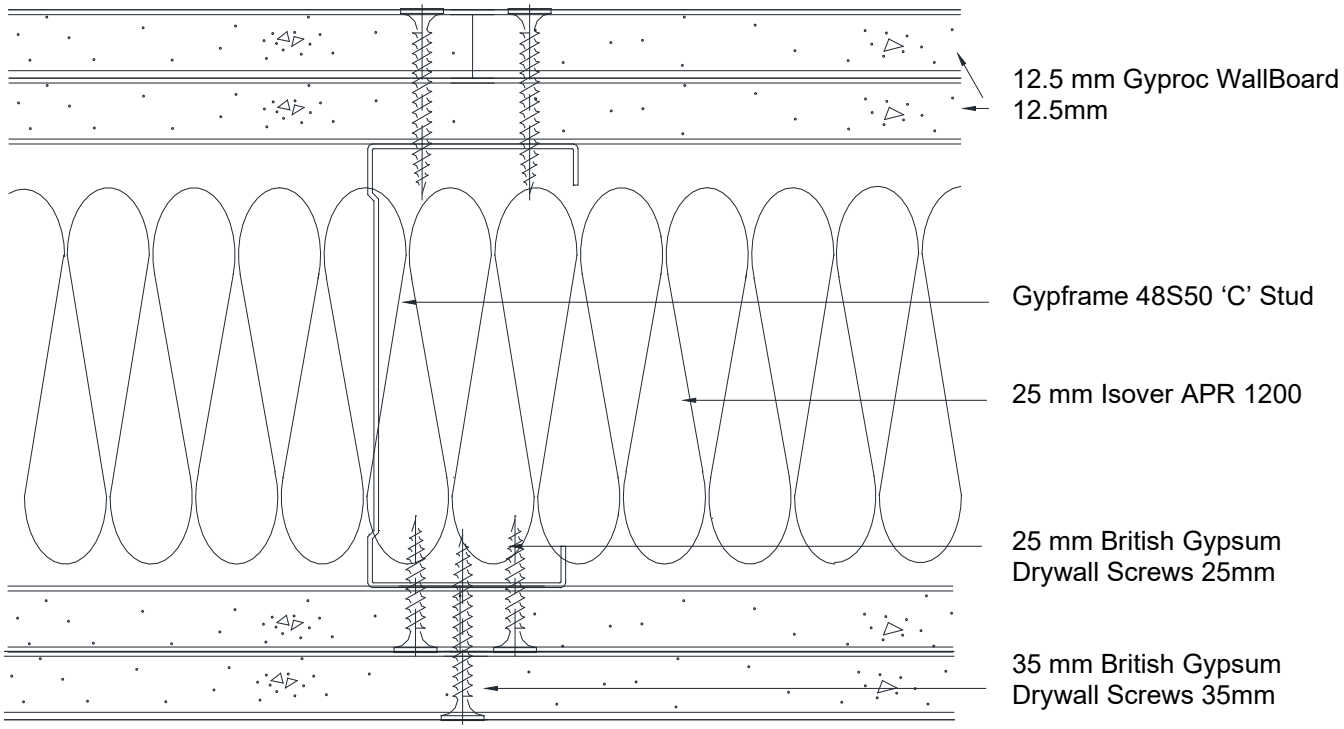

Figure 1. Horizontal cross section – GypWall metal stud partition with 48 mm stud framework clad each side with a double layer of 12.5 mm Gyproc WallBoard 12.5mm with 25 mm Isover APR 1200 in the cavity

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Construction Details

The specimen was constructed in a refractory concrete lined steel restraint test frame with an opening of 3000 mm (high) x 3000 mm (wide).

Gypframe 50FEC50 Folded Edge Standard Floor and Ceiling Channels were fixed to the head and base of the test aperture at 600 mm centres using 60 mm fire resistant fixings.

Gypframe 48S50 'C' Studs were positioned at 600 mm centres between the channels. The right-hand stud viewed from the unexposed face was not fixed to the perimeter of the test frame, and the gap between the stud and the frame lining was filled with a 25 mm thick rock mineral fibre gasket.

At the left-hand edge a Gypframe 48S50 'C' Stud was used to fix the partition to the test frame, using 60 mm fire resistance fixings at 600 mm centres.

Thermocouples were added to the studs at mid height on the web, hot and cold flanges of the central two studs.

25 mm Isover APR 1200 was placed within the stud cavity.

Both the unexposed face and the exposed face of the specimen were clad with a double layer of 12.5 mm Gyproc WallBoard 12.5mm. The inner layer boards were fixed with 25 mm British Gypsum Drywall Screws 25mm at 300 mm centres around the perimeter of the boards only. The outer layer boards were fixed with 35 mm British Gypsum Drywall Screws 35mm at 300 mm centres around the perimeter and within the field of the boards.

All vertical joints were staggered between layers, with a full board at the free end of the exposed face. A horizontal joint was positioned at 2400 mm from the base on the outer layer boards and at 600 mm from the base on the inner layer boards, on both faces of the specimen. A Gypframe GFS1 Fixing Strap was used behind the horizontal outer layer board joint.

All external board joints were taped and filled using Gyproc Paper Joint Tape and Gyproc Joint Filler as appropriate. All screw heads were spotted using Gyproc Joint Filler.

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3. Test Reports / Extended Application Reports and Test Results in Support of Classification

3.1 Test Reports / Extended Application Reports

Name of Laboratory	Name of sponsor	Test reports / extended application report Nos.	Test method / extended application rules & date
The Building Test Centre	British Gypsum	BTC 20702F	BS EN 1364-1:2015

3.2 Test Results

Test method & Test number	Parameter		Results
BS EN 1364-1:2015 BTC 20702F	Integrity	Sustained Flaming	99 minutes, no failure
		6 mm Gap Gauge	99 minutes, no failure
		25 mm Gap Gauge	99 minutes, no failure
		Cotton Pad	98 minutes
	Insulation		86 minutes

All data can be found in the relevant test report.

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4. Classification and Field of Application

4.1 Reference of Classification

This classification has been carried out in accordance with clause 7.5.2 of BS EN 13501-2:2016.

4.2 Classification

The element, GypWall metal stud partition with 48 mm stud framework clad each side with a double layer of 12.5 mm Gyproc WallBoard 12.5mm with 25 mm Isover APR 1200 in the cavity, is classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r	G	K

Fire resistance classification: EI 60 / E 90

4.3 Field of Application

This classification is valid for any of the following end use applications, as specified in BS EN 1366-1: 2015.

i) Decrease in height.

ii) Increase in the thickness of the wall.

iii) Increase thickness of component materials.

iv) Decrease in the linear dimensions of the boards but not thickness.

v) Decrease stud spacing.

vi) Decrease in fixing centres.

vii) Increase in the number of horizontal joints, of the type tested, when tested with one joint not more than (500±150) mm from the top edge.

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Extension of Width

For test specimens tested without a supporting construction, the width of an identical construction may be increased as the specimen was tested at nominally 3000 mm wide with one vertical edge without restraint.

Extension of Height

The height of the construction may be increased by 1000 mm under the following conditions:

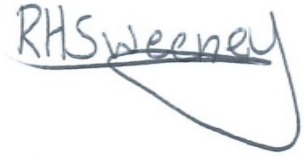
$$\frac{\text{30 minutes}}{\leq 100 \text{ mm}}$$

5. Limitations

This classification document does not represent type approval or certification of the product.

6. Authorisation

SIGNED



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