

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
70 MM STUD FRAMEWORK CLAD EACH
SIDE WITH A DOUBLE LAYER OF 15 MM
GYPROC WALLBOARD 15MM WITH 25 MM
ISOVER APR 1200 IN THE CAVITY.

Classification report No: BTC 22664FC

Issue number: One

Date of issue: 26th June 2023

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

Customer: **British Gypsum**

BTC 22664FC: Page 1 of 7

The Building Test Centre

Fire Acoustics Structures

The Building Test Centre
East Leake
Loughborough
Leics. LE12 6NP
Tel: (0115) 945 1564
Email: btc.testing@saint-gobain.com

Contents

1. Introduction.....	3
2. Details of Classified Product.....	3
2.1 Product Description	3
3. Test Reports / Extended Application Reports and Test Results in Support of Classification	5
3.1 Test Reports / Extended Application Reports	5
3.2 Test Results	5
4. Classification and Field of Application.....	6
4.1 Reference of Classification.....	6
4.2 Classification	6
4.3 Field of Application	6
5. Limitations.....	7
6. Authorisation.....	7

1. Introduction

This classification report defines the classification assigned to element GypWall metal stud partition with 70 mm stud framework clad each side with a double layer of 15 mm Gyproc WallBoard 15mm 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 70 mm stud framework clad each side with a double layer of 15 mm Gyproc WallBoard 15mm with 25 mm Isover APR 1200 in the cavity, fully described below, is provided in support of the classification, listed in Clause 3.1.

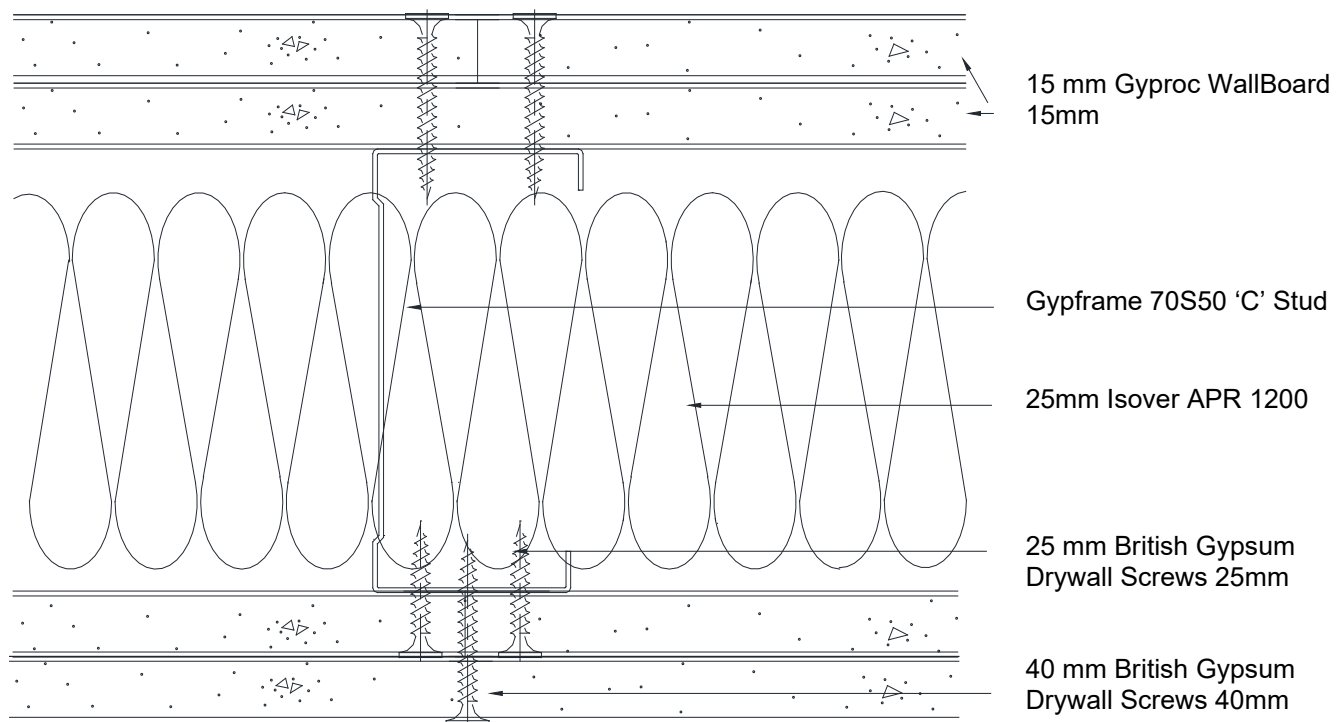


Figure 1. Horizontal cross section – GypWall metal stud partition with 70 mm stud framework clad each side with a double layer of 15 mm Gyproc WallBoard 15mm with 25 mm Isover APR 1200 in the cavity.

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 72FEC50 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 70S50 '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 70S50 '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.

A layer of 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 15 mm Gyproc WallBoard 15mm. 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 40 mm British Gypsum Drywall Screws 40mm 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 20758F	BS EN 1364-1:2015

3.2 Test Results

Test method & Test number	Parameter		Results
BS EN 1364-1:2015 BTC 20758F	Integrity	Sustained Flaming	105 minutes, no failure
		6 mm Gap Gauge	105 minutes, no failure
		25 mm Gap Gauge	105 minutes, no failure
		Cotton Pad	104 minutes
	Insulation	88 minutes	

All data can be found in the relevant test report.

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BTC 22664FC: Page 5 of 7

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 70 mm stud framework clad each side with a double layer of 15 mm Gyproc WallBoard 15mm 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
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Fire resistance classification: EI 60 / E 90

4.3 Field of Application

This classification is valid for any of the following end uses applications, as specified in BS EN 1364-1: 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.

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:

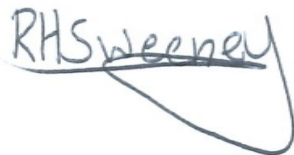
30 minutes	60 minutes	90 minutes
≤ 100 mm	≤ 100 mm	≤ 100 mm

5. Limitations

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

6. Authorisation

SIGNED



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Rebecca Sweeney
BSc. (Hons.)
Scientist

APPROVED



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Paul Miller
BSc. (Hons.)
Fire Test Manager