

# Tested to the EXTREME



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## Tested to the extreme

### Durability - Severe Duty and beyond

GypWall EXTREME was duty rating tested to BS 5234: Part 2 1992 and easily passed the requirements for Severe Duty in a single layer. British Gypsum has worked with a number of architects, contractors and clients to develop additional tests which more closely reflect real life damage in high traffic areas. Here are the results:

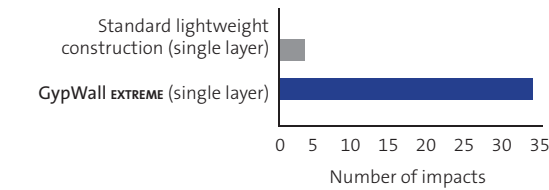
#### Durability\*

##### 1. The deliberate attack

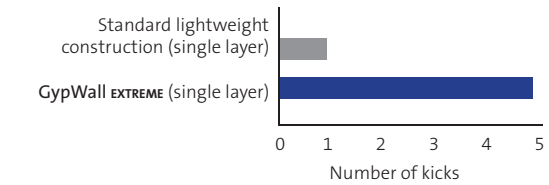
Typical in schools this requirement is to protect against penetration through to the cavity as a result of deliberate attack.

Using BS 5234 annex D methodology, a test was developed to replicate the surface impact and energy of an adult kick.

##### Hard body impact to destruction



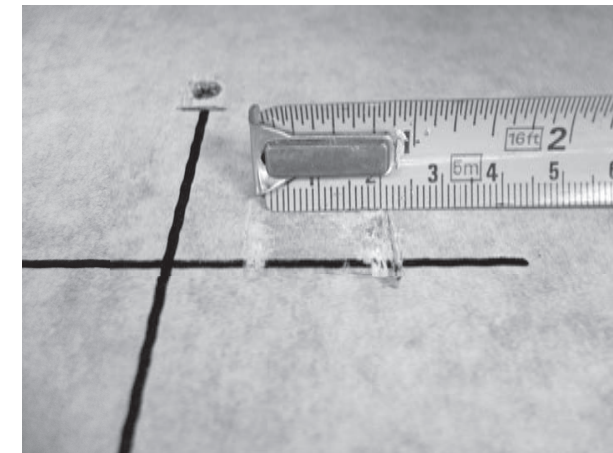
##### Kick test



##### 2. The accidental impact

Glancing blow impact is a key trigger of unplanned maintenance in schools and hospitals.

##### Glancing blow test



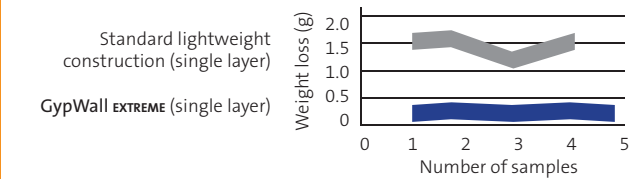
Typical damage caused to a single layer of GypWall EXTREME by a trolley loaded to 150kg impacting at walking speed, at an angle of 30° to the plane of partition.

##### 3. The accidental abrasion

Schools and hospital walls suffer as a result of abrasion, either accidentally caused by equipment (bins, chairs, bags) or deliberately (e.g. keys).

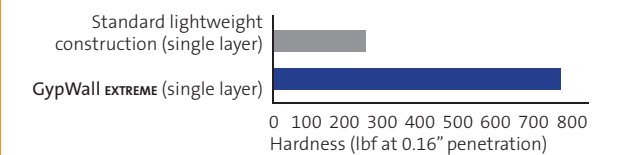
##### Scratch test

British Gypsum has developed a surface scratch evaluation which measures the material lost as a result of a repeatable cycling gauge test.



##### Hardness test

The JANKA ball test method from ASTM D 1037-99, measures the force required to push a steel ball into the board.



### Fixing strength

Rigidur H has approximately three times the fixing strength of plasterboard.

Items weighting up to 18kg can be fixed directly to a single layer of 15mm Rigidur H using a single nail picture hook. This is equivalent to a large mirror.

Items weighting up to 30kg can be fixed directly to a single layer of 15mm Rigidur H using a No.10 wood screw. This is equivalent to electronic interactive white board† used in schools.

GypWall EXTREME can reduce the amount of patressing and additional framework required on large commercial projects, as well as future-proofing the partition.



\* Contact the Technical Advice Centre Tel on 0844 800 1991 for more information regarding the additional durability tests conducted.

† Please refer to the manufacturers' recommendations when mounting and fixing.

### Fire and acoustic performance

#### Excellent acoustic performance to meet strict guidelines

Healthcare, education and commercial buildings have varied acoustic performance requirements, as guided by documents such as HTM 08-01 (healthcare) and BB93 (education). GypWall EXTREME has the flexibility to offer solutions for the highest acoustic requirements in such applications, and can achieve up to 52dB with a single layer of board on Gypframe 70 S 60 'C' Studs.

#### Example GypWall EXTREME specifications

Board specification	Stud size	Cavity insulation	Sound insulation
Single layer 15mm Rigidur H	Gypframe 70 S 60 'C' Stud	50mm Isover APR 1200	52 (R <sub>w</sub> ) dB
Outer layer 12.5mm Rigidur H with an inner layer of 15mm Gyproc SoundBloc	Gypframe 70 AS 60 AcouStud	25mm Isover APR 1200	58 (R <sub>w</sub> ) dB

#### Fire performance

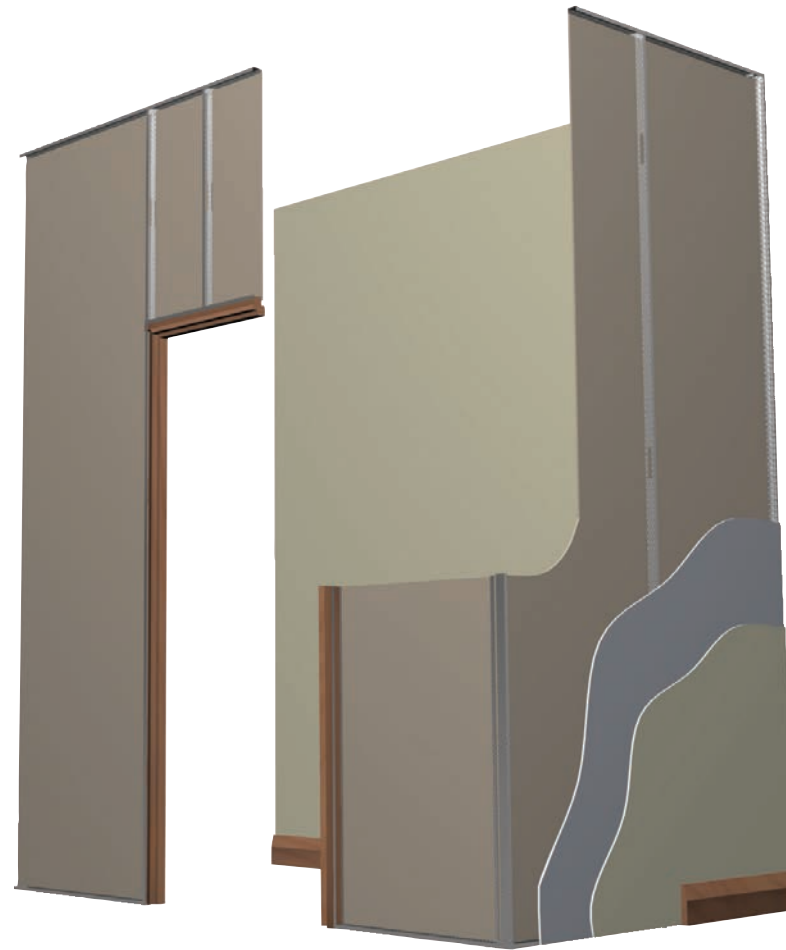
Rigidur H achieves A2 Euroclass reaction to fire rating, and is Class 0 in accordance with the national Building Regulations Approved Document B.

GypWall EXTREME in single layer form can achieve up to 60 minutes fire resistance, tested to BS EN 1364-1: 1999.



**GypWall EXTREME** is the ultimate impact resistant partition for use where extra durability is required above and beyond Severe Duty.

It is able to cope with the rigours of intensive high traffic use in commercial applications where block work has traditionally been specified.



**GypWall EXTREME** combines Gyproc plasterboards, Gypframe metal and Rigidur H advanced fibre reinforced gypsum board it creates a lightweight, cost effective solution both in terms of construction and lifetime costs.

**GypWall EXTREME** is fully adoptable and compatible with other British Gypsum systems, offering the potential to value engineer your project.

#### Key facts

- Tested to be above and beyond the performance requirements of *BS 5234: Part 2 1992 Severe Duty*
- Capable of supporting heavy fixings on a single layer, reducing the need for additional pattering
- A lightweight alternative to traditional construction methods that can significantly reduce build programmes
- Excellent surface finish
- Reduces maintenance costs
- High acoustic performance - up to 52dB in single layer system on standard Gypframe 'C' Studs
- Extremely cost-effective system combining Gyproc plasterboards and Rigidur H fibre boards
- Can be recycled under the British Gypsum Plasterboard Recycling Service
- Covered by the British Gypsum **SpecSure®** lifetime system warranty

#### Applications

##### Healthcare

High traffic areas, mental health partitioning, A&E, corridors, care homes, nurse accommodation.

##### Education

Unsupervised corridors and stairwells, toilets and changing rooms, gyms, student accommodations.

##### MOD

Accommodation.

##### Custodial

Low, medium risk areas.

##### Leisure

Sports centres, hotel corridors, shopping centres.

**GypWall EXTREME**

For more information on GypWall EXTREME or Rigidur H please visit [www.british-gypsum.com](http://www.british-gypsum.com), or contact the Technical Advice Centre Tel on 0844 800 1991

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