



MegaExcel



The **superior, stronger and specialised** plasterboard



Partnership . Trust . Innovation

The superior, stronger and specialised plasterboard.

MegaExcel plasterboard combines outstanding fire, impact and acoustic performance and has double the strength of standard plasterboard. The board is available in both square edge and tapered edge at 12.5mm and 15mm thicknesses at 2000mm, 2700mm, 3000mm & 3600mm as standard.

The technically advanced board offers a 60-minute fire rating at 15mm - as part of a certified system. MegaExcel is compliant with BS EN 520 types D, F, I and R - offering acoustic insulation (D), superior fire integrity (F), BS 5234 'Severe Duty' compliance (I) and exceptional board strength (R). The tapered edge board enables the standard tape and joint drywall system. The square edge board can be used as a backing layer or pre-finished with a vinyl covering of your choice for the ultimate labour-saving solution.

Partnering to deliver quality

Excel partnered with Siniat to produce MegaExcel and MegaDecorated plasterboard - the first internal lining boards designed and tested specifically for the offsite industry. Siniat form part of the global Etex group, manufacturing drywall products for partitions, ceilings, wall linings and external sheathing purposes.



MegaExcel is the board in its raw form - suitable for standard taping & jointing and is directly plasterable. MegaDecorated is the same board but with a pre-decorated vinyl finish. MegaDecorated can be fixed along the board edges and finished with two-part plastic 'H' sections making it the ultimate time-saving solution for offsite.

The Benefits

MegaExcel's numerous technical advantages make it the high-performance plasterboard of choice for the offsite industry:



Compliant with BS EN 520
- types **D, F, I & R**



60 minute fire integrity -
as part of a certified system



2x stronger than
standard plasterboard



Euroclass
A2-S1, d0



Light to medium
load bearing capacity



Acoustic insulation
BS EN 520 type D



BS 5234 Severe
Duty compliant



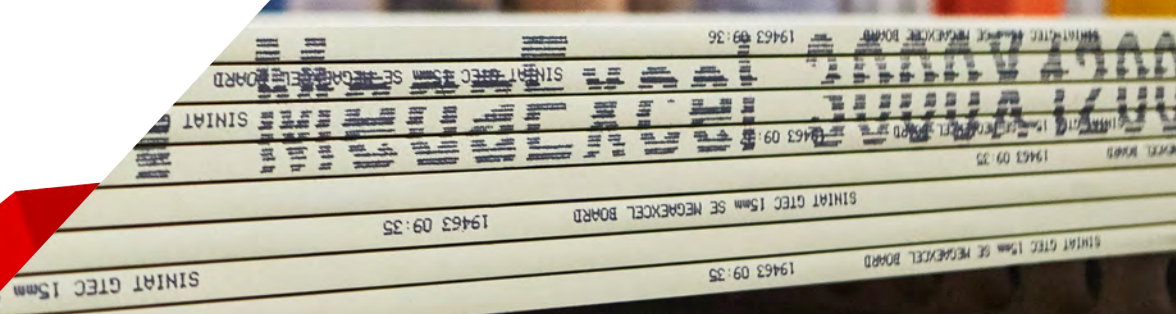
Available in
3.6m panels



Manufactured
in the **UK**



Square & tapered edge
boards in **12.5mm** &
15mm thicknesses





Eco Offsite used MegaExcel boards to fit out the interior of a three-storey modular apartment building. The boards provided an easy and efficient fixing process, particularly as we were able to plaster directly onto the boards which saved us valuable time in an industry where speed is key to operations. The fire rating and system certifications for MegaExcel have ensured that we continue to use the boards on various projects.

Andy King
Commercial Director at **Eco Offsite**

We required a 1 hour Fire Rated product that did not require decorating on site, and was faster to install than traditional methods. Our previous method required two layers of plasterboard and a clean-up operation of our newly installed floors due to the untidy nature of taping and jointing materials. The product provides a great solution to these issues, with labour savings. Our client is very pleased with the finished building.

Jason Alexander
Project Manager at **Hi-Level Mezzanines**



We use the Mega Excel Board as our internal lining board on all our projects. The board properties including fire, sound and impact tick so many boxes that we find it is a unique selling point to all our clients

Stevin Tedstone
Production Manager at **Extraspace Solutions**

It has been a delight to deal with such a forward thinking company. The products, prices, service, and technical expertise have ensured that Elite have remained a loyal customer.

Mike Twizell
Marketing & Sales Director at **Elite Systems GB**



Frequently Asked Questions

Do I need to cover the exposed screw heads in the ceilings with filler or intumescent sealant?

No. When fire testing is carried out the heat on the screw is not sufficient to cause the ceiling to fail prematurely because the area is so small so there is no requirement in the test method to fix thermocouples onto the screw head.

Is MegaExcel a sound board?

As a generic gypsum wall board MegaExcel complies with BS EN 520 Types D, F, I & R (D = High Density, F = Fire Resistant, I = Impact Resistant, R = Robust) under D MegaExcel is acoustic like dB board.

Does the fire performance differ for a tape & jointed system?

Where a MegaExcel plasterboard layer is used with a taped and jointed finish this will give a comparable fire and acoustic performance to that of the vinyl finished systems tested.

Do I need to use intumescent sealant in the wall joints?

No. Intumescent sealant is not required as the Excel fire tests were conducted without sealant in the wall joints.

Can I use square edged boards behind a suspended ceiling without having to tape & joint?

Yes. You can butt the boards up closely together and apply intumescent sealant down the joint.

Do you supply the plastic angles?

Yes. Angles can also be wrapped in the same vinyl finish but minimum order quantities apply.

What sizes are the MegaExcel boards available in?

2400mm, 2700mm & 3000mm are all readily available and we stock 3600mm as a standard modular requirement. We can also supply bespoke sizes cut in our factory.

Do I need to glue the board back to the central stud if I'm perimeter fixing?

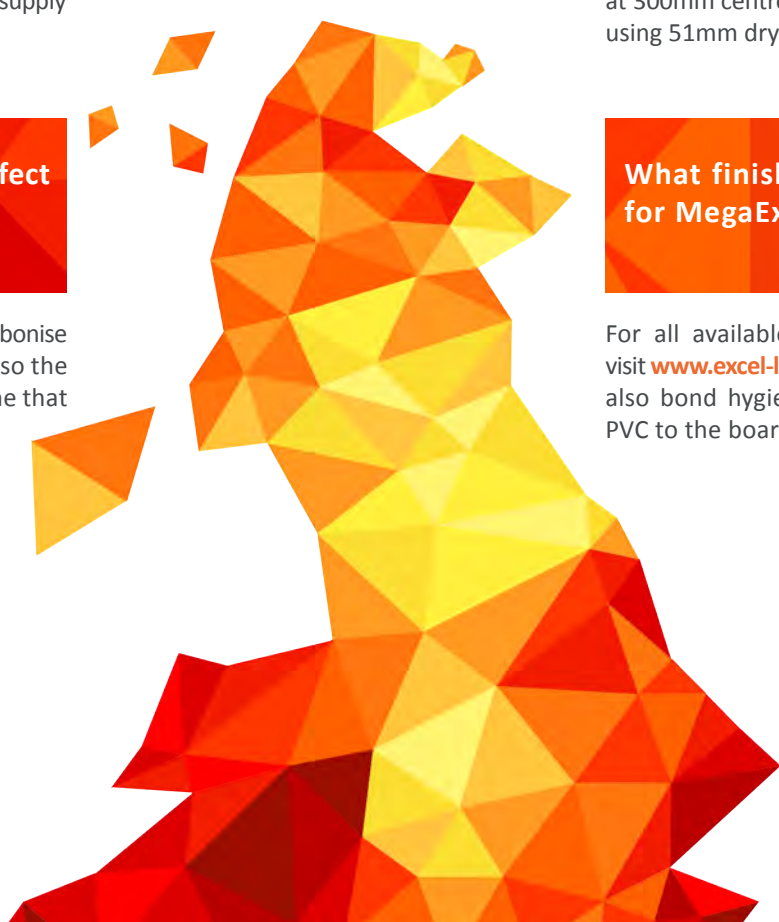
For a perimeter fixed system boards should be glued to the central stud and fixed at 300mm centres around the perimeter using 51mm drywall screws.

Does a two-part trim affect fire performance?

No. The plastic 'H-section' trims carbonise and create a seal down the joints so the timber is protected until such time that the board starts to fail.

What finishes are available for MegaExcel?

For all available vinyl finishes please visit www.excel-laminating.co.uk. We can also bond hygienic steel and hygienic PVC to the boards.



Hygienic MegaExcel

MegaExcel can be bonded to hygienic PVC or hygienic steel to provide a sterile pre-finished lining solution suited to a variety of controlled areas where sanitation is paramount including medical environments, food processing rooms & public bathrooms.

Hygienic MegaExcel combines the superior strength, technical advantages and fire-rating of MegaExcel with the comprehensive performance guarantee of the hygienic substrate. Please discuss your board performance requirements with us to ensure we deliver the optimal solution.



Hygienic PVC MegaExcel

MegaExcel bonded to hygienic PVC provides a lighter-weight hygienic solution that is warm to the touch and can be easily cut to size. Under the EU Directive 97/48/EC PVC MegaExcel has been approved for use with food stuffs and is also ideal for use in laboratories and chemical processing rooms.

PVC MegaExcel has a non-toxic, easy to clean surface that prevents or reduces micro-organism growth and allows repeated cleaning cycles. The robust PVC MegaExcel is resistant to scratching, marking, chemicals and noxious gases; it is also fire resistant (Class 1 fire rated to BS476 pt 6 & 7 & EN134501-1: B-s3, d0) and self-extinguishing.

Hygienic Steel-Bonded MegaExcel

MegaExcel bonded to pre-finished steel (Advantica™ L) has been developed for use in environments where cleanability, durability and non-contamination are paramount including food processing, pharmaceutical and medical environments. Advantica™ L offers a comprehensive guarantee of up to 15 years - dependent on the nature of the project.

Advantica™ L is resistant to staining and provides anti-microbial and anti-static properties as standard. Advantica™ L has been subject to stringent testing and is fully compliant with REACH regulations. The fire performance of the Advantica™ L steel has been tested against EN 13501-1 +A1 and MegaExcel has a certified 60-minute fire integrity as part of a standard wall system - see p.10-12 for further information on fire certifications for MegaExcel boards.



Case Study

Following a catastrophic fire at Weybridge Hospital, Paragon Space was appointed to provide a new 780m² healthcare facility - comprising of two GP surgeries and a Minor Injuries unit - to a strict 14 week timescale.

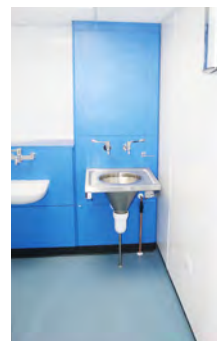
Due to the medical nature of the building, Paragon Space required a HTM (Health Technical Memoranda) compliant pre-bonded hygienic drywall system to line the refurbished units. Excel provided the pre-bonded PVC MegaExcel panels that work with the standard modular PVC trims for an easy to clean, fire-resistant solution. Commenting on the PVC MegaExcel boards, Gareth Foster, Managing Director at Paragon Space, said:

“

Hygienic PVC MegaExcel fulfilled our requirement for a HTM compliant board that is durable, non-toxic and easy to fix in our factory.

Gareth Foster
Managing Director - Paragon Space

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**PARAGON
SPACE**

NHS

Hinkley Point C

Hinkley Point C is the first nuclear power station to be built in the UK in over 20 years. The first of a new generation of nuclear power stations set to deliver low-carbon electricity to around 6 million homes in the UK upon completion in 2025.

At the peak of the construction phase, Hinkley Point C will require around 5,600 workers on site so a project of this magnitude requires the best products and services available. Excel worked in partnership with two of the largest companies in the offsite industry to deliver over 3000 metric tonnes of MegaExcel to a meticulously timed schedule for two separate Hinkley projects.



Premier Modular was appointed by EDF Energy to provide 410,000ft² of office facilities to house management and technical personnel for the duration of the construction phase of the £20 billion project.

Premier required a superior performance board with a 60-minute fire-rating for the office facilities. Excel provided the BS EN 520 compliant MegaExcel boards with a vinyl-faced finish, known as MegaDecorated. The MegaDecorated panels helped Premier to stick to a strict time scale and enabled them to deliver the 299 modules to site on time within the 16-month project timescale and without the complication of additional trades such as plasterers or decorators.

Companies such as Premier Modular are a testament to the service and products provided by Excel that keep customers returning time and time again. When asked to comment on the partnership, David Harris, Divisional Director at Premier Modular, said: "Premier recognise Excel as one of its key supply chain partners, having a long-standing business relationship founded on high levels of service and quality products."

410,000
ft² office facilities

299
modules in total



Caledonian | Hinkley Point C

Caledonian was appointed by EDF Energy to design and build 1,496 hotel-style offsite accommodation units to house the construction workers at Hinkley Point C.

Each unit of the £50 million project, in association with Laing O'Rourke, has been lined with 12.5mm vinyl-faced MegaExcel boards to provide a robust, specialised finish that has enabled the units to be delivered to site 96% complete. The campus is expected to operate for just over six years - after which time the units will be removed and repurposed due to the longevity of the materials used.

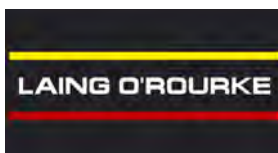
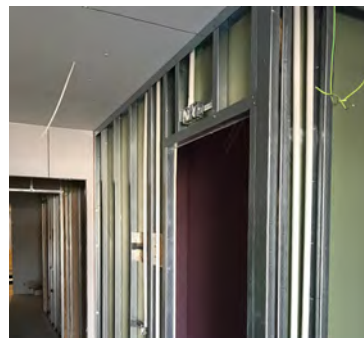
Commenting on Caledonian's first experience working with Excel, Dennis Hollingworth, Marketing Manager at Caledonian, said:

"Given the high profile and large-scale nature of the Hinkley Point C project, it has been vital for Caledonian to stick to a strict schedule of construction and delivery. The MegaExcel boards have proven to deliver significant time and labour savings and have enabled units to be 96% complete when delivered to site. We have developed a fantastic working relationship with Excel; they have kept us informed, and their products, service and delivery have been second to none. We look forward to working with them on more projects in the future."

£50m
project value

1,496
modules in total

12.5
mm MegaExcel

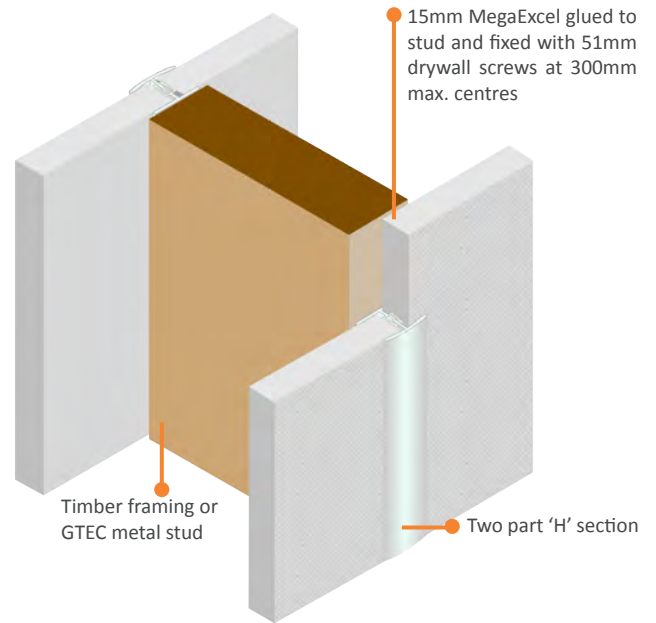


Assembly Details

Fixing to Walls

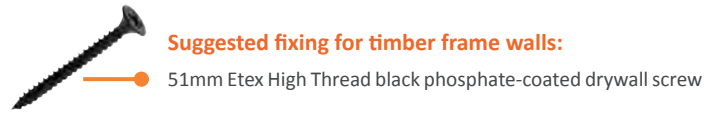
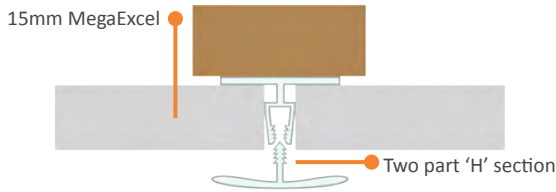
MegaExcel can be fixed to either timber or metal framing systems for walls and ceilings using readily available fixings.

Intermediate fixings are not required for the main face of the panel. Only the board perimeters require fixing to the studs. Boards should be glued to the central stud and fixed at 300mm centres using 51mm drywall screws. The fixings are then concealed using a two-part plastic 'H' section.



Fixing to Ceilings

Screwfix boards at 230mm centres on the centreline of each panel and at 150mm centres on perimeters and cut edges.



External Walls

Performance Ratings of timber stud external wall

TMXL 01 | 60 minute fire rating | 48 R_wdB

Studs: 140mm timber studs at 600mm centres

Facings: Pre-finished steel bonded to 9mm MGO board to external side & 15mm MegaExcel board to internal side

Insulation: 120mm Earthwool at 10kg/m³ density



TMXL 02 | 60 minute fire rating | 40 R_wdB

Studs: 140mm timber studs at 600mm centres

Facings: 31mm CladEx - pre-finished steel bonded to 30mm rigid extruded ecofoam board - and 11mm OSB 3 to external side & 15mm MegaExcel to internal side

Insulation: 120mm Earthwool at 10kg/m³ density



TMXL 03 | 60 minute fire rating | 50 R_wdB

Studs: 140mm timber studs at 600mm centres

Facings: 31mm CladEx - pre-finished steel bonded to 30mm rigid extruded ecofoam board - and 11mm OSB 3 to external side & 15mm MegaExcel board fixed to GTEC Resilient Bar on internal side

Insulation: 120mm Earthwool at 10kg/m³ density



Performance Ratings of steel 'C' stud external wall

SMXL 01 | 60 minute fire rating | 51 R_wdB

Studs: 100mm steel 'C' studs at 600mm centres

Facings: Pre-finished steel bonded to 9mm MGO board to external side & 15mm MegaExcel board to internal side.

Insulation: 100mm Earthwool at 10kg/m³ density



SMXL 02 | 60 minute fire rating | 47 R_wdB

Studs: 100mm steel 'C' studs at 600mm centres

Facings: 31mm CladEx - pre-finished steel bonded to 30mm rigid extruded ecofoam board - and 9mm Multipro to external side & 15mm MegaExcel board to internal side

Insulation: 100mm Earthwool at 10kg/m³ density



Partitions

Performance Ratings of 70mm metal 'C' stud non-loadbearing partitions

SMXL 03 | 60 minute fire rating | 43 R_wdB

Studs: 70mm steel C Studs at 600mm centres
Facings: 15mm MegaExcel board to each side
Insulation: N/A



SMXL 04 | 60 minute fire rating | 47 R_wdB

Studs: 70mm steel C Studs at 600mm centres
Facings: 15mm MegaExcel board to each side
Insulation: 50mm Earthwool at 16kg/m³ density



SMXL 05 | 60 minute fire rating | 56 R_wdB

Studs: 70mm steel C Studs at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm GTEC Standard board to each side inner
Insulation: 50mm Earthwool at 16kg/m³ density



SMXL 06 | 60 minute fire rating | 59 R_wdB

Studs: 70mm steel C Studs at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm GTEC Standard board to each side inner fixed to GTEC resilient bar.
Insulation: 50mm Earthwool at 16kg/m³ density



Performance Ratings of timber non-loadbearing partitions

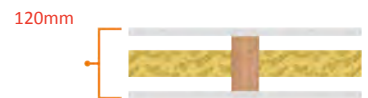
TMXL 04 | 60 minute fire rating | 41 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side
Insulation: N/A



TMXL 05 | 60 minute fire rating | 44 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side
Insulation: 50mm Earthwool at 16kg/m³ density



TMXL 06 | 60 minute fire rating | 47 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm GTEC Standard board to one side inner
Insulation: 50mm Earthwool at 16kg/m³ density



TMXL 07 | 60 minute fire rating | 54 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm GTEC Standard board to one side inner fixed to GTEC resilient bar.
Insulation: 50mm Earthwool at 16kg/m³ density



TMXL 08 | 60 minute fire rating | 50 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm Standard board to each side inner
Insulation: 50mm Earthwool at 16kg/m³ density



TMXL 09 | 60 minute fire rating | 53 R_wdB

Studs: 50 x 50mm staggered stud spacing at 300mm
Facings: 15mm MegaExcel board to each side outer & 12.5mm GTEC Standard board to one side inner
Insulation: 50mm Earthwool at 16kg/m³ density



TMXL 10 | 60 minute fire rating | 58 R_wdB

Studs: 90 x 40mm at 600mm centres
Facings: 15mm MegaExcel board to each side outer & 12.5mm Standard board to each side inner fixed to GTEC Resilient Bar
Insulation: 50mm Earthwool at 16kg/m³ density



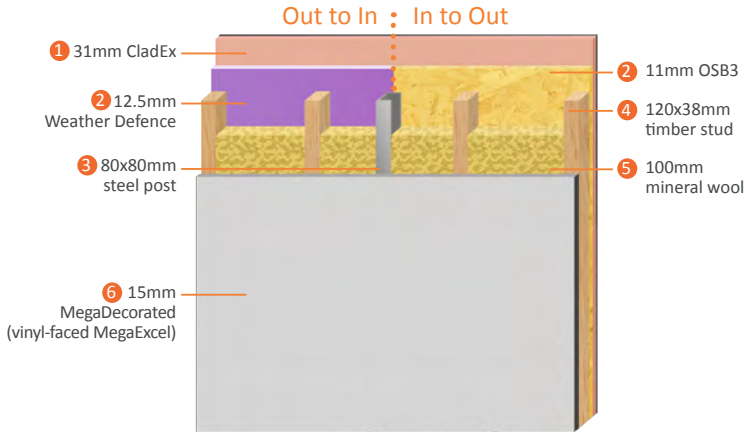
TMXL 11 | 60 minute fire rating | 65 R_wdB

Studs: Double 90 x 40mm timber studs at 600mm centres
Facings: MegaExcel board to each side outer & 12.5mm Standard board to each side inner
Insulation: 50mm Earthwool at 16kg/m³ density

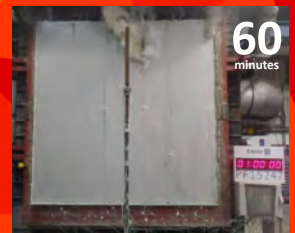
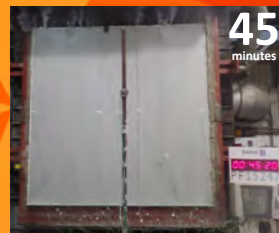
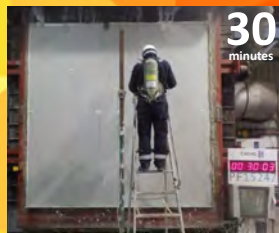
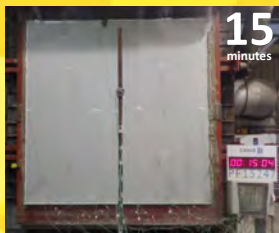


Fire Tests

Wall Composition



Fire Test BMT/FEP/F15247 in Action



Fire Test Reference BMT/FEP/F15246

A non-loadbearing external wall system was submitted to a fire resistance test in accordance with BS EN 1364-1:2015 for a duration of 77 minutes on 10th Nov. 2015. The wall system, nominally 3000mm H x 3000mm W x 179mm T, was made up of the following composition from the exposed face outwards:

- 31mm CladEx - 0.7mm steel sheet bonded to 30mm rigid extruded ecofoam board - fixed to OSB & timber studs using 41mm screws
- 12.5mm GTEC Weather Defence board fixed at 300mm centres using 50mm drywall screws
- 120mm x 38mm CLS softwood timber studs at 400mm centres
- 80mm x 80mm x 6mm SHS steel post
- 100mm mineral wool insulation friction fitted in stud cavities
- 15mm vinyl-faced MegaExcel fixed at board edges only using 51mm drywall screws at 300mm centres.

The specified wall system passed the fire test and achieved a 60-minute fire rating. The test was terminated after 77 minutes, at which point no failures of the test criteria had occurred:

- Integrity (E): 77 minutes** - No failure at termination
- Insulation (I): 77 minutes** - No failure at termination
- Radiation (W): 77 minutes** - No failure at termination



Fire Test Reference BMT/FEP/F15247

A non-loadbearing external wall system was submitted to a fire resistance test in accordance with BS EN 1364-1:2015 for a duration of 63 minutes on 13th Nov. 2015. The wall system, nominally 3000mm H x 3000mm W x 177mm T, was made up of the following composition from the exposed face outwards:

- 15mm vinyl-faced MegaExcel fixed at board edges only using 51mm drywall screws at 300mm centres.
- 100mm mineral wool insulation friction fitted in stud cavities
- 80mm x 80mm x 6mm SHS steel post
- 120mm x 38mm CLS softwood timber studs at 400mm centres
- 11mm OSB 3 sheathing board fixed at 300mm centres using 50mm drywall screws
- 31mm CladEx - 0.7mm steel sheet bonded to 30mm rigid extruded ecofoam board - fixed to OSB & timber studs using 41mm screws

The specified wall system passed the fire test and achieved a 60-minute fire rating. The test was terminated after 63 minutes, at which point no failures of the test criteria had occurred:

- Integrity (E): 63 minutes** - Failure at 63 minutes
- Insulation (I): 63 minutes** - No failure at termination
- Radiation (W): 63 minutes** - No failure at termination

Fire Test Results

Fire Test BMT/FEP/F15246 Test Date: 10/11/15
Wall Composition: Outside to in
 Tested in accordance with BS EN 1364-1:2015 the wall system achieved the following fire resistance certifications:
Integrity (E): 60 min. Insulation (I): 60 min. Radiation (W): 60 min.

Fire Test BMT/FEP/F15247 Test Date: 13/11/15
Wall Composition: Inside to out
 Tested in accordance with BS EN 1364-1:2015 the wall system achieved the following fire resistance certifications:
Integrity (E): 60 min. Insulation (I): 60 min. Radiation (W): 60 min

Load Bearing Fixtures

Drywall constructions can accommodate most fixtures provided that appropriate fixtures and fixing provisions are used.

MegaExcel boards can accept fixtures directly using the recommended fixings for very light to medium loads. For medium load fixings MegaExcel boards must be carefully and accurately drilled and all fixings must be installed in accordance with the fixing manufacturer's instructions.

Table One: Fixings strengths pullout strengths

Test	Fixing Description	Straight Pull (N)	Mode of failure
A	No. 8 chipboard screw	150	Board
B	No. 8 high thread drywall screw	200	Board
C	No. 10 laminating drywall screw	250	Board
D	No. 8 tap-in plastic plug & screw	260	Board
E	No. 10 screw & plastic wing toggle	430	Fixing
F	No. 8 screw & plastic self-drill redi-driver	410	Board
F ²	Small redi-driver plastic self drill	180	Board
G	No. 6 screw & plastic rawl plug for plasterboard	450	Board
H	No. 4 screw & metal interset umbrella type	750	Fixing
I	No. 5 screw & metal interset umbrella type	500	Fixing
J	No. 8 screw & metal self drill redi-driver	800	Board
K	No. 6 /55 metal interset	300	Fixing

Table One Notes:

1. Where the object to be fixed may be subject to fluctuating loads, e.g. book shelves, fixing manufacturers typically divide the figures in the above table by 4 to calculate the number of fixings needed to carry the weight of an object.

2. For shear loads, the above pullout strength figures improve by 1.5x. For eccentric loads the above figures will be reduced by a factor of 0.66.

Table Two: Fixture fitting provisions

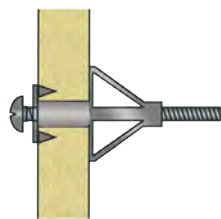
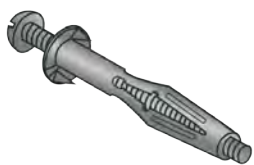
Test	Fixing Description	Straight Pull (N)
Very Light	Small pictures	Picture hooks
		Wood screws
		Rawlplug poly-toggle 10-511
Light	Mirrors	Para bolt universal plug: U08 x 050
	Floor cupboards	Fischer Nylon universal fixing: 53334
	Light fittings	Fixing channel
	Coat hooks	Redi-driver
Medium	Radiators	Rawlplug Interset M5 x 40
	Wall cupboards	Parabolt cavity fixing 05C035
	Water heaters	Fischer cavity fixing FO55 x 405
	Sanitary ware	Fixing channel
		Timber battens
		Boxed studs
		Extra studs
Heavy	Wall mounted sanitary ware	See manufacturer's literature
	Heavy shelving	See manufacturer's literature

Table Two Notes:

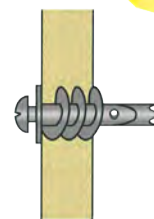
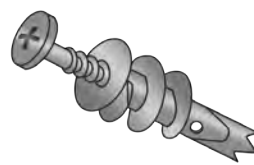
1. See manufacturer's literature for maximum loadings

Fixings

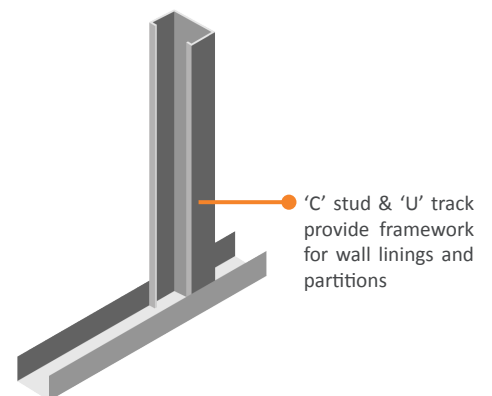
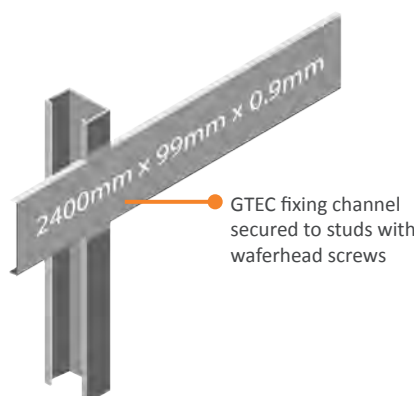
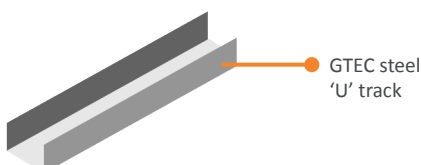
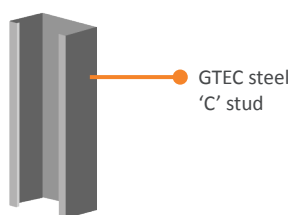
Fischer HM Cavity Fixing



Redi-Driver Fixing



Fixing Profiles



Technical Specification

Usage

MegaExcel boards are fixed to either timber or metal framing systems for walls and ceilings, using readily available fixings.

Composition

Aerated calcium sulphate di-hydrate with fillers and fibres enclosed inside a tough paper with bound edges. Core and papers are bonded with starch. Edge glue is PVA.

Appearance

MegaExcel is coloured yellow on the front and grey on the back.

Compliance Authority

BS EN 520:2004+A1:2009 Type D, F, I & R compliant.

Finishing

MegaExcel can be jointed and finished with any GTEC jointing systems. The surface is suitable for finishing with BS EN 13279-2 class B quality wallboard skimming plaster.

Reaction to Fire

Euroclass A2-s1,d0
60 minute fire resistance as part of a certified system.

Health & Safety

There is no health hazard for gypsum or paper. The core contains fibreglass rovings. Users should wear a facemask when cutting the board with an electric-powered circular saw. The saw must be fitted with a dust extractor.

COSHH data is available on request.

Fire performance and sound insulation depend on wall system.

Physical Properties

Strength to BS EN 520

12.5mm board - Longitudinal breaking load >725N
Transverse breaking load > 300N
15mm board - Longitudinal breaking load >870N
Transverse breaking load > 360N

Moisture Content

>2%

Nominal Mass

12.5mm board - 11.0kg/m²
15mm board - 13.0kg/m²

Thermal Conductivity, λ_R

0.25 W/mK according to EN 12524:2000

Thermal Resistance, R

12.5mm board - 0.05 m²K/W
15mm board - 0.06 m²K/W

Mean water vapour resistance factor

$\mu = 10$ to BS EN 12524 standard

Nail & screw pull through

>700N

Impact Resistance

Impact resistance to BS 5234-2 depends on the wall system. According to Appendix B:
12.5mm board - Heavy Duty
15mm board - Severe Duty

About Excel & Siniat

Excel is an independent, family-run business and we take great pride in providing an unrivalled level of commitment to our customers. We continuously invest in our people, our plant and our products to ensure that our customers receive the highest quality of service.

Our partnership with Siniat has led to the development of the technically advanced MegaExcel board. Siniat form part of the Etex Group, manufacturing drywall products for partitions, ceilings, wall linings and external sheathing purposes. By forming key partnerships we are able to consistently deliver high-performance solutions.



Excel Laminating Limited
www.excel-laminating.co.uk

Unit 3 Kingston International Business Park, Hedon Road, Hull HU9 5NX

T. (01482) 326866 E. sales@excel-laminating.co.uk



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