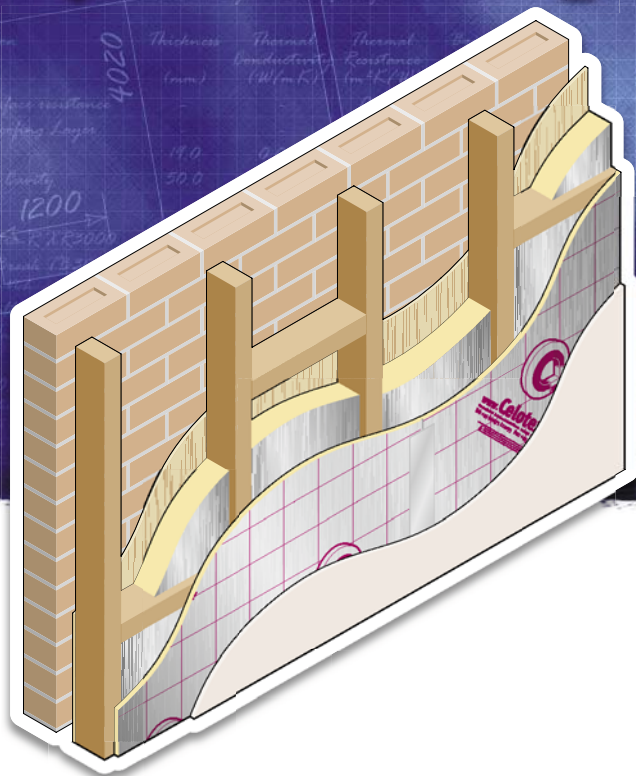


Timber frame wall lining



Use **Celotex T-Break™ TB3000** and **Celotex tuff-R™ GA3000** high performance thermal insulation in timber frame wall applications to minimise insulation thickness and give the following benefits:

- Offers the thinnest solution available
- Provides reliable long term energy savings for buildings
- Low emissivity foil facers give improved thermal insulation with cavity air spaces
- Provides a vapour control layer when board joints are taped
- Reduces thermal bridging through studs and rails
- Can be nailed direct to stud framing
- Dryline directly over insulation
- Provides cavity for services

Example U-value calculation

	Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m ² K/W)	Pitch & Bridge Details
Outside surface	–	–	0.040	
Brick	103.0	0.770	0.134	17.2%
Cavity	50.0	–	0.180	
Plywood	9.0	0.143	0.063	
Celotex GA3080	80.0	0.023	3.478	15%
Cavity (low emissivity)	20.0	–	0.665*	15%
Celotex TB3012	12.0	0.023	0.500	
Gypsum wallboard	12.5	0.160	0.080	
Inside surface	–	–	0.130	

U-value = 0.25 W/m²K

* Airspace resistance calculated in accordance with BS EN ISO 6946: 1997 Annex B.2. Based on BBA certified emissivity values. Applicable only when using **Celotex** product.

Installation guidelines

- Make sure all studs and rails are flush, with no projections, and that services are correctly installed.
- Cut **Celotex tuff-R GA3000** to fit tightly between all studs and rails.
- For optimum thermal performance, the unprinted foil surface should face the air cavity.
- Insert insulation into framing and push back to plywood sheathing. Fit services in to cavity if required.
- Measure the wall height from floor level to underside of ceiling joists and cut board length to suit, using a trimming knife.
- Ensure that the wall insulation is continuous with the floor perimeter insulation.
- Cut boards for infill panels, using off-cuts where possible, making sure there are no gaps at wall abutments.
- Tightly butt edges of boards together, making sure there are no gaps.
- Temporarily secure the boards with clout nails at 600 mm centres. Mark stud lines on board surface as fixing guides for dry lining.
- Always fix back to solid timber, both at stud lines and at top and bottom rails.
- Ensure that all board surfaces are clean and free from dust and then apply aluminium foil vapour-seal tape to all joints. Taping the joints of the **Celotex** insulation with self adhesive aluminium foil tape provides a good vapour control layer and improves air tightness.
- Seal the insulation at all abutments and service penetrations with a vapour resistant sealant.
- Fix plasterboard lining over the **Celotex** insulation using plasterboard nails or screws of appropriate length and joint or skim to the desired finish.
- No separate vapour check membrane is required in this application; **Celotex** insulation acts as an effective internal vapour control layer when all joints are sealed.

Product descriptions

Celotex T-Break™ TB3000 is a thin, foil faced insulation board with un-reinforced core foam and thicknesses ranging from 12 to 30 mm. The **T-Break** name stems from the design function of the range; which is to provide simple solutions to overcome localised thermal bridges. **Celotex** is unique in being able to offer boards as thin as 12 mm to the market for this purpose.

*Always install **Celotex T-Break TB3000** in accordance with the instructions supplied by **Celotex Limited**.*

Standard board dimensions

1200 mm x 2400, 450, 300 & 150 mm*
(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with
BS EN 13823: 2002 = Class D/s2/do
Surface spread of flame in accordance with
BS 476: 1997 Part 7 = Class 1

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
TB3012	12	0.50
TB3020	20	0.85
TB3025	25	1.05
TB3030	30	1.30

Celotex tuff-R™ GA3000 has long been at the heart of the **Celotex** product range, providing a range of thermal insulation solutions to the builder. The **Celotex tuff-R GA3000** product is a foil faced thermal insulation board which has core foam uniquely reinforced with glassfibre. These products still feature the best reaction-to-fire performance (Euroclass D/S2/do) measured in accordance with new European Standards of any similar product on the market.

*Always install **Celotex tuff-R GA3000** in accordance with the instructions supplied by **Celotex Limited**.*

Standard board dimensions

1200 mm x 2400 mm*
(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with
BS EN 13823: 2002 = Class D/s2/do
Surface spread of flame in accordance with
BS 476: 1997 Part 7 = Class 1

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
GA3035	35	1.50
GA3040	40	1.70
GA3045	45	1.95
GA3050	50	2.15
GA3055	55	2.35
GA3060	60	2.60
GA3065	65	2.80
GA3070	70	3.00
GA3075	75	3.25
GA3080	80	3.45
GA3090	90	3.90

**Note: Products listed above are generally available ex-stock.*

Other sizes and thicknesses are available, subject to minimum order quantity. Please check for availability before ordering.

General information

Storage and handling

- **Celotex** insulation boards should be stored dry, flat and clear of the ground. Only as much material as can be installed during a single working period should be removed from storage at any one time. If boards are stored under tarpaulins, care should be taken to prevent rope damage to the boards.
- Care should also be taken to ensure that packs are not dropped onto corners or edges.
- Where possible, cut the product using a trimming knife, rather than a saw, to minimise dust creation.
- If using a saw, dust extraction equipment, eye protection and face masks must be provided. Dust or particles in the eyes should be washed out with liberal quantities of water.
- Aluminium foil edges may be sharp. Avoid sliding bare hands along board edges.

Characteristics, properties or performance of materials described herein are derived from data obtained under controlled test conditions. **Celotex Limited** makes no warranty, express or implied as to their characteristics under any variations from such conditions in actual constructions.

All products are supplied subject to our standard terms and conditions of sale, a copy of which is available on request.

Typical details shown in this brochure are provided for guidance only and are not to scale. **Celotex Limited** makes no warranty, express or implied as to the suitability of such details for any particular project. It is the responsibility of the designer to ensure that any design or construction details used are suitable for the project, having due regard to the environmental and structural factors which are beyond the control of **Celotex Limited**.

Notwithstanding the foregoing, nothing herein stated shall exclude or restrict:

- 1 The liability of **Celotex Limited** in respect of death or personal injury pursuant to the relevant provisions of the *Unfair Contract Terms Act 1977*, or
- 2 The liability of **Celotex Limited** in respect of any damage caused by a defect to the extent that such comes within the relevant provisions of the *Consumer Protection Act 1987*.

Health and safety

Full guidance on the appropriate measures to be taken by an employer in accordance with the *COSHH Regulations* is provided in the **Celotex Health and Safety Data Sheet** which can be downloaded from our web site.

Quality assurance

Product and application development is a priority at **Celotex**, with a focus on high performance, durability and usability. This is achieved through a quality management system which has been fully assessed and certified as meeting the requirements of BS EN ISO 9001: 2000.



Other products

Celotex offers a comprehensive range of insulation products for floor, wall and roof applications. For information please visit www.celotex.co.uk or contact our **Sales Department**.

Ancillary components

A list of suppliers of ancillary components for the fixing and sealing of **Celotex** products is available from www.celotex.co.uk or by contacting our **Technical Advisory Service**.

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