



## **SAFETY DATA SHEET**

Celotex: TB4000, GA4000, XR4000, CW4000  
Thermaclass Cavity Wall 21

## Safety Information Relating To PIR Insulation

This information sheet provides information about the characteristics of Celotex polyisocyanurate (PIR) insulation products, including in relation to fire performance.

Celotex PIR insulation is rigid plastic foam, sandwiched between facings. The foam is made

by mixing chemicals methylene diphenylmethane diisocyanate (MDI) with polyol, flame retardant and other additives in the presence of catalysts and a blowing agent. Facings (foil-paper composites and/ or plasterboard) are adhered to the board during the manufacturing process.

## Fire Performance

Celotex PIR is tested to BS EN 13501-1. It achieves a classification of F. In layman's terms, this means it is combustible and will contribute to the overall fire load. Combustion products will include toxic gases such as carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and hydrogen cyanide (HCN).

Some uses of PIR insulation are restricted under the Building Regulations and related guidance because of its behaviour in relation to fire. Celotex products should not be used in the external walls of buildings over 11 metres in height. Recent changes to Building Regulations mean that only non-combustible insulation or insulation of limited combustibility should be used in buildings of that height. When using PIR insulation products, you need to satisfy yourself that your intended use of the product meets all relevant national Building Regulations and guidance and local, national and other applicable standards relevant for your construction or application, including requirements in relation to

fire and applicable height restrictions.

When considering the use of a Celotex product, please consult the applicable product datasheet. Where BBA Certificates are provided, please read the certificate for details of the application for which the product has been assessed and related restrictions, including as to height. Our product Declarations of Performance also provide information on product properties including thermal performance and reaction to fire testing (Euroclass testing). This information is available on our website at [www.celotex.co.uk](http://www.celotex.co.uk).

The use of combustible materials including PIR should be considered in preparing any fire risk assessment for the building and, in the event of a fire, firefighters should be told about the presence of PIR and other combustible materials at the relevant property.

## Storage, Handling, Installation and Disposal

Keep PIR insulation boards away from heat, sparks, hot surfaces, open flames or other ignition sources at all times.

Wear protective gloves when carrying or handling insulation boards to protect your hands from sharp edges (as a result of the aluminium facer). Wash hands thoroughly after handling as a matter of good occupational hygiene.

Cutting and drilling insulation boards will release dust. Inhalation of dust may cause respiratory irritation and other health conditions. Any such activity should be carried out in a well-ventilated area, wearing a dust mask and safety glasses. Dust from the process should be collected and disposed of. If in doubt following inhalation of

dust, get medical attention promptly.

PIR boards should be stored under cover. If left outside they will deteriorate over time. If a board is damaged, it should not be used.

When installing insulation, cover exposed foam edges with aluminium foil tape to provide fire protection. In most uses the joints between boards should also be taped to optimise resistance to moisture transmission and fire.

Dispose of surplus products via a licensed waste disposal contractor.



## HEALTH and SAFETY DATA SHEET

**Celotex TB4000, GA4000, XR4000, CW4000, Thermaclass Cavity Wall 21**  
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**Product name** Celotex TB4000, GA4000, XR4000, CW4000, Thermaclass Cavity Wall 21

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Additional information** These products are considered articles under REACH and therefore, no SDS is legally required. The SDS has been provided for additional information, assuring the safe handling of the products.

**Identified uses** Thermal insulation product for buildings.

**Uses advised against** Use only for intended applications. Some uses of PIR insulation are restricted under the Building Regulations and related guidance because of its behaviour in relation to fire. When using PIR insulation products, you need to satisfy yourself that your intended use of the product meets all relevant national Building Regulations and guidance.

#### 1.3. Details of the supplier of the safety data sheet

**Supplier** Celotex  
Lady Lane Industrial Estate  
Hadleigh  
Ipswich  
Suffolk  
IP7 6BA  
UK  
T: +44 (0) 1473 820850  
E: technicalsupport@celotex.co.uk

#### 1.4. Emergency telephone number

**Emergency telephone** +44 (0) 1473 822093  
8:30am - 5:00pm Monday - Friday (GMT)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Not Classified

**Environmental hazards** Not Classified

**Human health** No specific health hazards known. Sharp edges and corners may cause cuts and abrasions. If dust is generated: Dust may irritate the eyes and the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

#### 2.2. Label elements

**Hazard statements** NC Not Classified

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**Labelling notes** As supplied, this product does not meet the requirements for labelling.

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Product description** Polyisocyanurate rigid foam insulation core with a thermal conductivity of 0.022 W/m.K. (TB4000, GA4000, CW4000, XR4000) or 0.021 W/m.K (Thermaclass Cavity Wall 21) with low emissivity aluminium foil - paper - aluminium foil composite facings on both sides.

The product is defined as an article [Regulation (EC) No 1907/2006, as amended].

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Due to the physical nature of this product, exposure by this route is unlikely. IF INHALED: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If in doubt, get medical attention promptly.
<b>Ingestion</b>	Due to the physical nature of this product, it is unlikely that ingestion will occur. IF SWALLOWED: Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. If in doubt, get medical attention promptly.
<b>Skin contact</b>	Rinse with water. Remove contamination with soap and water or recognised skin cleansing agent. If in doubt, get medical attention promptly. If skin is punctured then treat as for a normal cut or wound. Apply pressure to stop bleeding and clean wound as necessary. Use appropriate dressing.
<b>Eye contact</b>	Due to the physical nature of this product, exposure by this route is unlikely. If dust has entered the eyes, proceed as follows. Remove any contact lenses and open eyelids wide apart. Rinse with water. Do not rub eye. Get medical attention if symptoms are severe or persist after washing.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	No specific symptoms known. If dust is generated: Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
<b>Ingestion</b>	No specific symptoms known. If dust is generated: May cause irritation. May cause discomfort.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Sharp edges and corners may cause cuts and abrasions.
<b>Eye contact</b>	Particles in the eyes may cause irritation and smarting.

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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
<b>Specific treatments</b>	No special treatment required.

### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Polyisocyanurate (PIR) foam: If ignited, hydrogen cyanide (HCN) and other toxic gases may be formed. In case of a fire involving the product, firefighters shall be informed that PIR foam is involved.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Oxides of nitrogen (NO <sub>x</sub> ). Hydrogen cyanide (HCN).

#### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Evacuate area. Cool products exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool products exposed to flames with water until well after the fire is out.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. In case of a fire involving the product, firefighters shall be informed that PIR foam is involved.

### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Follow precautions for safe handling described in this safety data sheet. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid generation and spreading of dust. Avoid inhalation of dust. Avoid contact with eyes. No smoking, sparks, flames or other sources of ignition near spillage. Wash hands thoroughly after handling.
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#### 6.2. Environmental precautions

<b>Environmental precautions</b>	The product is not expected to be hazardous to the environment. Insoluble in water. Aquatic toxicity is unlikely to occur. However, large or frequent spills may have hazardous effects on the environment. Collect spillage. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).
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#### 6.3. Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Collect spillage. Avoid generation and spreading of dust. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
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#### 6.4. Reference to other sections

<b>Reference to other sections</b>	For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.
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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

<b>Usage precautions</b>	Read and follow guidance in product literature issued by manufacturer for the product being considered. Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid and minimise handling which leads to dust formation. Avoid generation and spreading of dust. Prevent accumulation of dust. Avoid inhalation of dust. Use mechanical ventilation if there is a risk of handling causing formation of airborne dust.
<b>Advice on general occupational hygiene</b>	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

#### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep in a cool, well ventilated place. Store in a dry place. Do not store near heat sources or expose to high temperatures. Keep away from flammable and combustible materials.
<b>Storage class</b>	Unspecified storage.

#### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.2.
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### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

<b>Comments</b>	Exposure is minimal during normal use. Avoid and minimise handling which leads to dust formation.
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General dust exposure limits:

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

WEL = Workplace Exposure Limit.

#### 8.2. Exposure controls

<b>Appropriate engineering controls</b>	Dust may be released when the product is worked (drilled, sanded etc.). Use mechanical ventilation if there is a risk of handling causing formation of airborne dust. Observe any occupational exposure limits for the product or ingredients.
<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. If dust is generated: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.
<b>Hand protection</b>	For prolonged or repeated use: Wear protective gloves. During cutting, grinding, sanding operations, wear protective gloves. Wear protective gloves when carrying or handling insulation boards.
<b>Hygiene measures</b>	Good personal hygiene procedures should be implemented. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

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<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Harmful dust may be released during cutting or grinding process. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a suitable dust mask. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly.
<b>Environmental exposure controls</b>	Avoid generation and spreading of dust.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Flat board with foil facings.
<b>Colour</b>	Cream.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available.
<b>Flash point</b>	Not relevant.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Other flammability</b>	Achieves a Reaction to Fire classification of F when tested in accordance to BS EN 13501-1.
<b>Relative density</b>	Not determined.
<b>Insulation density</b>	26 - 36 kg/m <sup>3</sup>
<b>Solubility(ies)</b>	Insoluble in water.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

#### 9.2. Other information

<b>Thermal conductivity</b>	0.022 W/m.K (TB4000, GA4000, CW4000, XR4000) or 0.021 W/m.K (Thermaclass)
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
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#### 10.4. Conditions to avoid

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**Conditions to avoid** Avoid generation and spreading of dust. Keep away from heat, sparks and open flame.

### 10.5. Incompatible materials

**Materials to avoid** The foam core may be degraded by some solvents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Does not decompose when used and stored as recommended.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** Not regarded as a health hazard under current legislation. Exposure to components of the product are limited due to the physical form of the product.

#### Acute toxicity - oral

**Summary** Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Summary** Based on available data the classification criteria are not met.

#### Serious eye damage/irritation

**Summary** Based on available data the classification criteria are not met.

#### Respiratory sensitisation

**Summary** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Summary** Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Summary** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**Summary** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**Summary** Based on available data the classification criteria are not met.

#### Aspiration hazard

**Summary** Not relevant. Solid.

#### **General information**

No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.



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<b>Inhalation</b>	No specific symptoms known. If dust is generated: Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
<b>Ingestion</b>	No specific symptoms known. If dust is generated: May cause discomfort. May cause irritation.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Sharp edges and corners may cause cuts and abrasions.
<b>Eye contact</b>	Particles in the eyes may cause irritation and smarting.
<b>Route of exposure</b>	Inhalation Skin and/or eye contact
<b>Target organs</b>	No specific target organs known.

### SECTION 12: Ecological information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** The product is not believed to present a hazard due to its physical nature.

#### Acute aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

#### Chronic aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

#### 12.2. Persistence and degradability

**Persistence and degradability** There are no data on the degradability of this product.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

#### 12.4. Mobility in soil

**Mobility** The product is insoluble in water.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information** The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

**Disposal methods** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

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### SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

##### **Environmentally hazardous substance/marine pollutant**

No.

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### **National regulations**

Health and Safety at Work etc. Act 1974 (as amended).  
EH40/2005 Workplace exposure limits.  
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).  
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended).  
The Building Act 1984  
Building Regulations 2010 (as amended) and Approved Documents  
Building (Scotland) Act 2003  
Building (Scotland) Act 2004 (as amended)  
Building Regulations (Northern Ireland) Order 1979  
Building Regulations (Northern Ireland) 2012 (as amended)

##### **EU legislation**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>CAS: Chemical Abstracts Service.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.</p> <p>LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>EC<sub>50</sub>: 50% of maximal Effective Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
<b>General information</b>	This SDS is not mandated under REACH Regulation (EC) No 1907/2006 and is provided for information only. As supplied, this product does not meet the requirements for labelling.
<b>Training advice</b>	Read and follow guidance in product literature issued by manufacturer for the product being considered. Only trained personnel should use this material.
<b>Revision comments</b>	This is the second issue.
<b>Revision date</b>	26/01/2022
<b>SDS number</b>	9302

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

# Celotex

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Celotex reserves the right to amend or revise product specification without notice.

The information in this publication is correct at the time of publication. The information herein should not be read in isolation as it is meant only as guidance for the user, who should always ensure that they are fully conversant with the products and systems being used and their subsequent installation prior to the commencement of work.

Soprema Insulation Ltd trading as Celotex, registered in England, Company number 15191540

Registered office: Lady Lane Industrial Estate