

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

## Isothane Technitherm Cavity Wall Stabilisation And Insulation System

### Description of Product

This is an assessment of the Isothane Technitherm Cavity Wall Stabilisation and Insulation System.

Technitherm® closed cell polyurethane (PUR) cavity wall insulation is suitable for all masonry cavity walls including nominal uniform 40mm wide standard cavity walls and can be installed without major disruption to occupants and needs no maintenance.

The product is a cream coloured, polyurethane foam compound. The material is foamed in situ by mixing together isocyanate and resin components. The foam mix produced is soft and fluid but quickly expands and hardens to a rigid foam mass. It is injected as a syrup from a hand gun into the wall through nominal 12 mm diameter holes spaced in a predetermined pattern.



### Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Energy Economy and heat retention
- Durability serviceability and identification

### Validity

This certificate was first issued on 18<sup>th</sup> May 2015 and is valid until 18<sup>th</sup> May 2019

Issue Dated 16<sup>th</sup> May 2016

## Scope of Registration

The Registered System relates to Isothane Technitherm Cavity Wall Stabilisation and Insulation. The product performs a dual function including the restoration of structural stability and the reduction of the thermal transmittance of existing walls.

The product is for use in buildings up to 12m in height with uniform or uneven cavity widths not less than 40mm in compliance with BS8208-1:1985 :Part 6.2 and BS7456:1991, part A3 in Appendix A incorporating built- in obstructions, including;

- stone built homes with stone ties,
- in existing and non-domestic buildings with masonry inner and outer leaves, in which the conventional ties have corroded,
- where there are missing or defective damp proof courses,
- and in cavity walls of homes in flood risk areas.

The product essentially consists of a closed cell polyurethane (PUR). This particular material has been recognized by CLG as offering Good flood resilience characteristics based on laboratory testing carried out by the Department of Local Communities and Local Government. (Table 6.2, page 75, Improving the Flood Performance of New Buildings)

Although no current BBA or BRE certificates validate the use of the product within buildings over 12m in height, historically BBA approved installers have been able to obtain a site –specific waiver to go beyond the height limit stated with the agreement certificate following a satisfactory survey and assessment by the BBA.

This policy has now changed and the BBA no longer issue site specific height waivers, with the responsibility for individual assessments of the suitability of particular sites above 12 metres being transferred to the System Certificate holders in this instance Isothane Ltd. The product been used in practice by Rochdale Borough Council whilst refurbishing a 20 storey apartment block and a 16 storey apartment block. This installation was then backed up by a 25 year insurance backed Isothane manufacturers guarantee.

The raw materials are manufactured by the company, which carries out regular quality control checks to maintain product quality. The resin and isocyanate components that make up the system are classified as "Irritant" and "harmful", respectively under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) and the packaging bears the appropriate hazard warning labels. When fully cured, Isothane Technitherm does not constitute a hazard.

For Scottish purposes:

The product is for use in buildings up to 12m in height with uniform or uneven cavity widths not less than 25mm incorporating built- in obstructions, including stone built homes with stone ties, in existing and non-domestic buildings with masonry inner and outer leaves, in which the conventional ties have corroded, where there are missing or defective damp proof courses, and in cavity walls of homes in flood risk areas.

The product essentially consists of closed cell polyurethane (PUR). This particular material has been recognized by CLG as offering Good flood resilience characteristics based on laboratory testing carried out by the Department of Local Communities and Local Government. (Table 6.2, page 75, Improving the Flood Performance of New Buildings)

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## Conditions of Certificate

Stainless steel anchors are installed if Technitherm® is being used for stabilisation purposes at one metre horizontal centres at the upper floor level (structural engineers report may increase fixing specification or negate such a requirement).

Walls have to be suitable when assessed in accordance with BS 8208-1: 1985

The product cannot be used in walls that are bowed or distorted; however, it may be used in walls which have cracked along the line of the corroded wall ties. Such cracks have to be repointed prior to filling, to prevent rain penetration.

All of the cavity space from ground level to the roof or gable copings should be filled. Partial filling is only allowed when separately insulating semi-detached or terraced properties.

The product may only be installed when there are no signs of dampness on the inner face of the cavity wall other than those caused solely by condensation.

Any cavity fill will cause the outer leaf to dry more slowly and in, in certain conditions, may increase the risk of frost damage. Although this risk is slight, cavity filling must not be used when evidence of previous frost damage exists.

The product can also be used in any exposure zone as long as the above conditions are met.

Although no current BBA or BRE certificates validate the use of the product within buildings over 12m in height, the product can still be used for buildings over 12m in height provided an individual assessment of the suitability of particular sites in question is carried out by the System Certificate holder, in this instance, Isothane Ltd.

For LABC Warranty purposes:

The system can be used as an insulation component in new walls providing appropriate provision of wall ties is made.

For use in Warranty conversion projects; a Chartered Structural engineer must provide a structural assessment of the wall conditions and confirm the use of the product will contribute to achieving a structural life of 60 years for the remediated wall.

The recommendations and limitations within the BBA or BRE certificate are followed and the certificate remains current and not withdrawn at the time of the warranty application.

For Scottish purposes:

Stainless steel anchors are installed at one metre horizontal centres at the upper floor level (unless structural engineers report negates such a requirement).

Walls have to be suitable when assessed in accordance with BS 8208-1: 1985.

The product cannot be used in walls that are bowed or distorted; however, it may be used in walls which have cracked along the line of the corroded wall ties. Such cracks have to be repointed prior to filling, to prevent rain penetration.

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Although no current BBA or BRE certificates validate the use of the product within buildings over 12m in height, the product can still be used for buildings over 12m in height provided an individual assessment of the suitability of particular sites in question is carried out by the System Certificate holder, in this instance, Isothane Ltd. with Structural Engineering input provided.

Condensation risk calculation will be carried out in accordance with the manufacturer's procedure.

LABC consider that, Isothane Technitherm Cavity Wall Stabilisation and Insulation, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;



## The Building Regulations 2010 (as amended) England & Wales

AD A1	Loading
Note:	The product is acceptable
AD B3(4)	Internal Fire Spread (Structure)
Note:	The product is acceptable.
AD C2(a)(b)(c)	Resistance to moisture
Note:	The product is acceptable
AD J	Combustion appliances and fuel storage systems
Note:	The product is acceptable
AD L1A	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the wall structure.
Regulation 7	Materials and workmanship
Note:	The product is acceptable
Regulation 26	CO2 emission rates for new buildings
Note:	The product is acceptable



## The Building Regulations 2010 (as amended) England

AD L1A	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the wall structure.



## The Building Regulations 2010 (as amended) Wales

AD L1A	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the wall structure.



## The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks Domestic and Non-Domestic

Regulation 8	Durability, workmanship and fitness of materials
0.8.5:	Ways of establishing the fitness of materials
Regulation 9	Building Standards applicable to construction
Note:	Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.
Mandatory	
Standard 1.1	Structure
1.1.1	General
1.1.2	Loading
1.1.3	Design & Construction
Note:	This certificate takes cognisance of BBA Certificate 97/3426 and the Technitherm Installation Manual June 2014 in respect of the structural integrity of the elements of structures affected by the installation of this product. Within buildings over 12m in height, the product can still be used provided an individual assessment of the suitability of particular sites in question is carried out by the System Certificate holder, in this instance, Isothane Ltd. with Structural Engineering input provided.
Mandatory	
Standard 2.3	Structural protection
2.3.1	Elements of structure
Note:	This certificate takes cognisance of BBA Certificate 97/3426 and the Technitherm Installation Manual June 2014 in respect of the fire integrity of the elements of structures affected by the installation of this product.
Mandatory	
Standard 2.4	Cavity barriers
2.4.1	Cavity barriers
Note:	All cavities are fully filled when this product is installed.
Mandatory	
Standard 3.19	Combustion appliances – relationship to combustible materials
3.19.1 to 3.19.4	Relationship of chimneys and flues to combustible material
Note:	This certificate takes cognisance of BBA Certificate 97/3426 and the Technitherm Installation Manual June 2014 in respect of the fire integrity of the elements of structures affected by the installation of this product.
Mandatory	
Standard 3.4	Moisture from the ground
3.4.1	Treatment of building elements adjacent to the ground
Note:	This certificate takes cognisance of BBA Certificate 97/3426, the BRE Scotland Client Report - Building Regulations assessment of Technitherm,

and the Technitherm Installation Manual June 2014 in respect of the specification and installation details to meet this standard

Mandatory

Standard 3.10

Precipitation

3.10.3

Wall constructions

Note:

This certificate takes cognisance of BBA Certificate 97/3426, the BRE Scotland Client Report - Building Regulations assessment of Technitherm, and the Technitherm Installation Manual June 2014 in respect of the specification and installation details to meet this standard

Mandatory

Standard 3.15

Condensation (Domestic)

3.15.1:

Condensation

3.15.5:

Interstitial condensation

Note:

This certificate takes cognisance of BBA Certificate 97/3426, the BRE Scotland Client Report - Building Regulations assessment of Technitherm, and the Technitherm Installation Manual June 2014 in respect of the control of interstitial condensation within the elements of structures affected by the installation of this product. Isothane Ltd provide a condensation risk analysis for every project

Mandatory

Standard 6.1(b)

Carbon dioxide emissions

6.1.1:

Dwellings/SBEM

6.1.2:

Setting the target carbon dioxide emissions level

6.1.4

Fabric and fixed building services specification for 'notional' building

Mandatory

Standard 6.2

Building insulation envelope

6.2.1:

Maximum u-values for new buildings

6.2.3:

Limiting heat loss through thermal bridging (Domestic)

6.2.5:

Limiting heat loss through thermal bridging (Non Domestic)

Note:

Alterations: (upgrade of existing domestic and non-domestic buildings)  
Site-specific assessment of u-value relative to insulation will be required

Conversions and new build:

This system will contribute to a building achieving compliance with Mandatory Standard 6.1: Carbon Dioxide Emissions and Mandatory Standard 6.2: Building Insulation Envelope where full compliance is required.

## Non-Regulatory Information



### LABC Warranty

LABC Warranty conditionally accepts the use of this system when installed and used in accordance with the Scope and Conditions of this Certificate. Visit [www.labcwarranty.co.uk](http://www.labcwarranty.co.uk) for our LABC Warranty Technical Manual requirements and Warranty conditions of acceptance.

## Supporting Documentation

British Board of Agreement: Isothane Technitherm Cavity Wall Stabilisation And Insulation System. Agreement Certificate No 97 / 3426

BRE Client Report: Building Regulations assessment of Technitherm. Report Number 289052 Issue: 2

British Board of Agreement: Technitherm Engineering adhesion test on Technitherm injected cavity wall

Bsi. Certificate of Registration. Quality Management System – ISO 9001:2008

Certificate of Registration. Environmental Management System – ISO 14001:2004

BBA Approved Installer 8661

Health And Safety Policy Statement

BBA Statement: Changes to height restriction waivers for BBA approved injected cavity wall insulation.

CLG: Improving the Flood Performance of New Buildings. Table 6.2, page 75

Isothane: Environmental policy statement Part 5

Isothane: Quality policy statement

Isothane: Specimen paper for height waiver

Ofgem listed Bufca Eco Technitherm Guarantee



## Contact Information

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