



Confidential Report

Our Ref: 27/06605/10/24





Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.
Telephone: +44 (0) 113 259 1999
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 12 November 2024

Our Ref: 27/06605/10/24

Your Ref: ---

Page: 1 of 6

Client:

Thermo Protect Ltd

18 Callywith Gate
Launceston Road
Bodmin
Cornwall
PL31 2RQ

Job Title:

Fire Test on One Sample of Spray Foam Panel

Clients Order Ref:

Date of Receipt:

July 2024

Description of Sample:

One sample of expanding spray foam, referenced; Nexseal Closed Cell Uncoated.
The foam is applied directly to a 12mm Clacium Silicate Board

Work Requested:

We were asked to make the following test(s):

BS 476 Part 7

- * subcontracted test, UKAS accredited
- ** subcontracted test, EN ISO/IEC 17025 accredited
- *** not UKAS accredited

Note: This report relates only to the items tested.

Shirley® Technologies Limited. Registered Office: Wira House, West Park Ring Road, Leeds, LS16 6QL.
A company registered in England & Wales with company number 04669651. VAT Number GB 816764800.
BTTG™ and Shirley® are trade names of Shirley Technologies Ltd.
The supply of all goods and services is subject to our standard terms of business, copies of which are available on request.
Our laboratories are accredited to EN ISO/IEC 17025.



Date: 12 November 2024

Our Ref: 27/06605/10/24
Your Ref: ---

Page: 2 of 6

Client: Thermo Protect Ltd

Sample Description

General description		Enverge Nexseal Closed Cell SPF Uncoated
Product reference of composite		ENV/NEX/006/CC
Name of manufacturer of composite		Enverge
Thickness of composite		45-50mm
Surface	Generic type	Enverge Nexseal Closed Cell SPF Uncoated
	Product reference	ENV/NEX/006/CC
	Name of manufacturer	Enverge
	Thickness	45-50mm Average
	Density / weight per unit area	2kg Average
	Colour reference	Off-White/Cream
	Trade name of flame retardant	N/A
	Generic type of flame retardant	N/A
	Amount of flame retardant	N/A
Adhesive	Generic type	N/A
	Product reference	N/A
	Name of manufacturer	N/A
	Colour reference	N/A
	Application rate / thickness	N/A
	Application method	N/A
	Trade name of flame retardant	N/A
	Generic type of flame retardant	N/A
	Amount of flame retardant	N/A
Substrate	Curing process	N/A
	Generic type	Gypsum Board 9mm
	Product reference	N/A
	Name of manufacturer	British Gypsum
	Thickness	9mm
	Density / weight per unit area	1kg
	Colour reference	Grey
	Trade name of flame retardant	N/A
	Generic type of flame retardant	N/A
	Amount of flame retardant	N/A
Brief description of manufacturing process		The spray foam insulation is spray applied to substrates by experienced technicians using specialist plural component equipment
Additional Information		



Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.
Telephone: +44 (0) 113 259 1999
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 12 November 2024

Our Ref: 27/06605/10/24
Your Ref: ---

Page: 3 of 6

Client: Thermo Protect Ltd

FIRE TESTS ACCORDING TO BS 476-7:1997

Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products.

Date of Test: 08/11/24

Conditioning

The sample was conditioned to constant mass at a temperature of $23\pm 2^{\circ}\text{C}$ and a relative humidity of $50\pm 10\%$ and maintained in this condition until required for testing.

Mounting Method

Each specimen was tested as received. The foam was sprayed by the client, onto a 9mm Gypsum board.

Procedure

The test was carried out in accordance with BS 476-7:1997.

The following were recorded: -

- a) the time at which the flame front crosses each vertical reference line;
- b) the maximum extent of flame spread during the first 1.5 min from the start of the test;
- c) the maximum extent of flame spread during the whole test i.e. 10 min or less (if applicable)
- d) the time (and distance) at which maximum flame spread is reached.

The flame spread at 1.5min and the final flame spread results were compared with the standard class limits and a classification was assigned.



1066

Shirley® Technologies Limited. Registered Office: Wira House, West Park Ring Road, Leeds, LS16 6QL.
A company registered in England & Wales with company number 04669651. VAT Number GB 816764800.
BTTG™ and Shirley® are trade names of Shirley Technologies Ltd.
The supply of all goods and services is subject to our standard terms of business, copies of which are available on request.
Our laboratories are accredited to EN ISO/IEC 17025.

Copyright © 2024 Shirley Technologies Limited. All rights reserved.



Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.
Telephone: +44 (0) 113 259 1999
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 12 November 2024

Our Ref: 27/06605/10/24

Your Ref: ---

Page: 4 of 6

Client: Thermo Protect Ltd

Requirements

The class limits for flamespread, detailed in BS 476: Part 7: are set out below.

	Flame spread at 1.5 min (mm)	Final flame spread (mm)
Class 1	165 (+25)	165 (+25)
Class 2	215 (+25)	455 (+45)
Class 3	265 (+25)	710 (+75)
Class 4	Exceeding Class 3 limits.	

A definitive classification is based on a sample of six specimens and the figure in brackets gives the tolerance by which only one specimen in six may exceed the class limit assigned.

Results

The test results relate only to the behaviour of the test specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Time for flame spread to reach (s) (mm)								Flame spread at 1.5 min (mm)	Maximum flame spread (mm)	Time to reach maximum flame spread (s)
75	165	215	265	455	710	785	825			
--	--	--	--	--	--	--	--	<50	<50	600
--	--	--	--	--	--	--	--	<50	<50	73
--	--	--	--	--	--	--	--	<50	<50	180
--	--	--	--	--	--	--	--	<50	<50	110
--	--	--	--	--	--	--	--	<50	<50	70
--	--	--	--	--	--	--	--	<50	<50	420





Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.
Telephone: +44 (0) 113 259 1999
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 12 November 2024

Our Ref: 27/06605/10/24
Your Ref: ---

Page: 5 of 6

Client: Thermo Protect Ltd

Observations

Specimen 1, flashing and transitory flaming down to 165mm
Specimen 2, flashing and transitory flaming down to 165mm
Specimen 3, flashing and transitory flaming down to 165mm. Also sustained flame down to 200mm, but above ref line
Specimen 4, flashing and transitory flaming down to 165mm. Also sustained flame down to 200mm, but above ref line
Specimen 5, relit above ref line at 220 seconds at 215mm flashing
Specimen 6, flashing and transitory flaming at 215mm

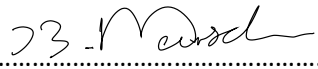
Classification

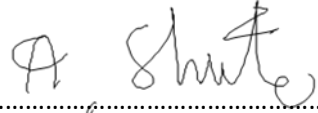
The results indicate the sample meets the performance requirements of **Class 1**.

Note

Where required to make a judgement to any pass/fail criteria an estimation of uncertainty of measurement has been taken into account. Under our Policy we have used a non-binary decision rule.

See our decision rules Policy (<https://www.bttg.co.uk/about-us/decision-rules-policy/>) for further information.

Reported by:  B Marsden (Mrs), Senior Laboratory Technician

Countersigned by:  A Shute, Section Leader

Enquiries concerning this report should be addressed to Customer Services.





Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.
Telephone: +44 (0) 113 259 1999
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 12 November 2024

Our Ref: 27/06605/10/24
Your Ref: ---

Page: 6 of 6

Client: Thermo Protect Ltd

Uncertainty Budget

The overall uncertainty budget for BS 476-7:1997 is as follows:-

Overall: $\pm 12\%$

