INTERNATIONAL FIRE CONSULTANTS LIMITED

PRIVATE & CONFIDENTIAL

IFC FIELD OF APPLICATION REPORT

Field of Application for Tenmat CavGuard Roll 65 Ventilated Cavity Barriers which Form Horizontal Fire-Separating Elements in Cavities within a Range of Wall Constructions

Fire Resistance Standard: EN 1363-1: 2012 and ASFP TGD19 (2017)

IFC Report PAR/21620/01

Prepared on behalf of:

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ISSUE AND AMENDMENT RECORD

Issue/ Revision	Date	Author	Review	Section	Amendments
Draft	March 2021	MB	DC	-	-
Draft 2	May 2021	MB	DC	Various	Amendments requested by client. Clarification regarding horizontal barriers within scope of ASFP TGD19. Reference to insulation within inner wall constructions; and comment regarding membranes in the cavity. Addition of alternative alignment of timber within inner wall construction. Clarification of scope with combinations of approved details.
Formal issue	May 2021	MB	DC	Various	Change of product name requested by client. Minor edits

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1. INTRODUCTION

This Engineering Assessment Report has been prepared by International Fire Consultants Ltd (IFC), on the instruction of Tenmat, to define the Field of Application for Tenmat CavGuard Roll 65 ventilated cavity barriers (hereafter also called CavGuard Roll 65, or cavity barrier), that are required to provide up to 60 minutes fire resistance performance, when installed as a horizontal fire-separating element in the concealed cavity within a composite wall Note 1. The cavity barriers will be adjudged against the test conditions of EN 1363-1: 2012 and the additional criteria defined in Technical Guidance Document TGD19, issued by ASFP Note 2.

Note 1 *It is acknowledged that ventilated cavity barriers, such as that under consideration herein, are designed for use in the cavity between the inner and outer constructions forming the 'external wall' of a building. However, this report by IFC considers the fire resistance of such products using the test arrangement described in Technical Guidance Document TGD19, published by ASFP. TGD19 does not refer to an 'external' wall and so this report, by IFC, does not use the term 'external' in relation to the test constructions. The typical test specimens shown in TGD19 do not attribute terms of reference for the construction elements forming each face of the cavity. For the purposes of this report, by IFC, the two construction elements will be referenced as 'inner' and 'outer', respectively. The cavity barrier is fitted to the inner wall, facing the cavity.*

Note 2 *There is no BS or EN standard for fire testing of ventilated cavity barriers, such as that under consideration herein. Ad-hoc testing of such products is usually employed by the test laboratory; using the arrangement described in Technical Guidance Document TGD19, published by ASFP; and the furnace conditions of BS EN 1363-1: 2012. (All references to ASFP TGD19, herein, apply to the edition dated November 2017).*

This Engineering Assessment Report has been produced using the principles outlined in the Passive Fire Protection Forum (PFPF): *'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products based on Fire Test Evidence, 2021, Industry Standard Procedure'.*

When establishing the variations in the construction that can achieve the required fire resistance performance, IFC complies with the principles found in the following documents:

- BS ISO/TR 12470-2: 2017 *'Fire resistance tests - Guidance on the application and extension of results from tests conducted on fire containment assemblies and products. Part 2: Non-load bearing elements'*
- EN 15725: 2010 *'Extended application reports on the fire performance of construction products and building elements'*

The assessment is based upon the information supplied to us, (detailed in Section 2,) and upon the fire resistance test evidence for parts of the constructions (detailed in Section 3). An analysis of the fire resistance performance of the cavity barriers is presented in Section 4, herein; which also defines the scope of approval by IFC. The omission of information on any components or manufacturing methods does not imply a lack of approval of those details, but these would need to be the subject of a separate analysis. Only variations specifically mentioned are supported by this assessment document, all other aspects must otherwise be as proven in tests summarised in Section 3, herein.

2. PROPOSAL

Test report WF419878 Issue 3 included a sample of Tenmat CavGuard Roll 65, installed as a horizontal 'ventilated cavity barrier', (using the arrangement described in ASFP TGD19); and tested to the furnace conditions of BS EN 1363-1: 2012 *Note 2*. It is proposed that Tenmat CavGuard Roll 65 may be installed in cavities within a number of composite wall constructions *Note 1*, as described in Section 4 of this report, without reducing the potential of the CavGuard Roll 65 to satisfy the integrity and insulation criteria of the test standard for 30 or 60 minutes; depending upon the fire resistance of the composite inner wall. Further details of the parameters for the proposed application are described in Section 4 herein.

For the sake of clarity, this Engineering Assessment Report, by IFC, only considers Tenmat CavGuard Roll 65 when installed as a **horizontal** ventilated cavity barrier; because this is the only arrangement described in ASFP TGD19. The test method in ASFP TGD19 should not be used to test vertically-aligned cavity barriers; nor is it inappropriate to use evidence for a horizontal cavity barrier to evaluate the same cavity barrier in a vertical application.

Test report WF419878 Issue 3 (see Section 3.1 below) does not refer to a brand name for the tested cavity barrier but Tenmat have supplied a written statement, to IFC, confirming that the specification of the proposed CavGuard Roll 65 cavity barrier is identical to that proven in test report WF419878 Issue 3. The specification of CavGuard Roll 65 is briefly summarised in Section 2.1, below; based upon the details in the test report. Anyone using this report should verify that details in their possession match those which are kept on file by IFC.

If variations occur between details described, herein, and those on the relevant documents, the former shall take precedence, or IFC should be contacted for clarification. Refer to Section 6 for recommendations with respect to audit and verification of the manufactured/installed assembly.

2.1 CavGuard Roll 65

The Tenmat CavGuard Roll 65 cavity barrier comprises a continuous length of Tenmat FF107 intumescent strip, 75 x 6mm in section, in a continuous polythene sleeve *Note 3*. The product is supplied on a roll, 6.3m long; for installation as a continuous length.

The CavGuard Roll 65 is designed for use in the cavity between the inner and outer constructions forming a composite wall *Note 2*. The CavGuard Roll 65 is mechanically fixed to the 'inner wall', facing the cavity. (Fixings depend upon type of wall construction/substrate; as defined herein).

Note 3 *Full specifications of the product are recorded in the test report; copies of which are held on confidential file by IFC.*

3. TEST EVIDENCE

The CavGuard Roll 65 cavity barrier has not been tested or assessed for fire resistance performance in the wall constructions proposed herein, hence the requirement for this assessment of fire resistance performance under the proposed conditions of a fire resistance test.

Evidence is, however, available for the proposed CavGuard Roll 65 barrier when fitted within a cavity between two bespoke wall construction, which demonstrates the respective characteristics and performance of the CavGuard Roll 65 barrier when exposed to the proposed fire resistance test conditions. This test evidence is summarised in Section 3.1, below;

3.1 WF419878 Issue 3

The test was performed on 24 October 2019, at the Warringtonfire laboratory, using the furnace conditions of BS EN 1363-1:2012; and additional criteria defined in ASFP TGD19 (2017).

Specimen D in this fire test included a ventilated cavity barrier, fitted horizontally in the cavity between two 'wall' constructions. The 'outer wall' was formed by a concrete block, with 9mm thick OSB3 board screwed on to the face towards the cavity. The 'inner wall' comprised a composite assembly, with softwood framing and an insulation core, clad with plasterboard on the unexposed face and 9mm thick OSB3 board on the face towards the cavity.

The assembly formed a 100mm wide cavity, measured between the OSB3 facings on the two walls, but two horizontal timber battens (80mm deep overall x 35mm wide, in section) were screwed to the inner wall construction; which reduced the effective cavity width to 65mm on the plane of the battens.

A horizontal cavity barrier, comprising a section of Tenmat FF107 intumescent strip (75 x 6mm) wrapped in polythene, was fixed to the 80mm deep face of the timber battens, using steel staples. The resulting 'air-gap', against the cavity barrier, was 59mm wide. The specimen was 1000mm long, and no butt-joint was included in the length of the barrier.

The barrier had not failed the integrity criteria when the test was terminated after 66 minutes. *Note 3* After the intumescent seal had activated, the insulation criterion 'above the air-gap' was exceeded after 60 minutes; but the insulation criteria at other areas were not exceeded when the test was terminated after 66 minutes. *Note 4*

Note 4 *The specimen was tested to the general principles of the test standard, but the laboratory adopted the ad-hoc procedure, defined in TGD19, to accommodate the air-gap; whereby the integrity of the barrier was monitored from the time at which the intumescent material reacted to close the void. The observations in the test report state that the 'closure' was effected after approximately 4 minutes and 30 seconds (from the start of the test).*

3.2 WF433220/R Issue 1

The test was performed on 13 November 2020, at the Warringtonfire laboratory, using the furnace conditions of BS EN 1363-1:2012; and additional criteria defined in ASFP TGD19.

Specimen A in this fire test included a ventilated cavity barrier, fitted horizontally in the cavity between two vertically aligned concrete blocks, each 1000mm long x 150mm thick; which were assembled to form a 40mm wide cavity.

A horizontal cavity barrier, comprising a section of Tenmat FF107 intumescent strip (75 x 4mm) in a polyurethane sleeve, was fixed to the face of one block, using 3no 5mm x 70mm steel screws. The FF107 was fitted on an 11mm thick layer of mineral fibre wool, so that the 'air-gap', (between the face of the FF107 and the opposing concrete) was 25mm wide. The specimen was 1000mm long, and a butt-joint was included in the length of the barrier.

The barrier had not failed the integrity criteria when the test was terminated after 190 minutes. *Note 3* Once the intumescent seal had activated, none of the insulation criteria were exceeded when the test was terminated after 190 minutes. *Note 4*

Note 4 *The specimen was tested to the general principles of the test standard, but the laboratory adopted the ad-hoc procedure, defined in TGD19, to accommodate the air-gap; whereby the integrity of the barrier was monitored from the time at which the intumescent material reacted to close the void. The observations in the test report state that the 'closure' was effected after approximately 2 minutes (from the start of the test).*

4. SCOPE OF APPROVAL

Evaluation of the Tenmat CavGuard Roll 65 ventilated cavity barrier will address the factors that influence the overall fire performance of such barriers under the fire test conditions of BS EN 1363-1: 2012. These factors are analysed in the following Sections, herein.

- Fire performance of the product
- Influence of alternative wall constructions *Note 1*
- Specifications for alternative wall constructions *Note 1*
- Installation parameters
- General considerations

The CavGuard Roll 65 cavity barrier will be assessed in respect of the integrity and insulation criteria of BS EN 1363-1: 2012 (and TGD19) for 30 or 60 minutes.

For the sake of clarity, the CavGuard Roll 65 shall be installed to form a horizontal 'barrier' within the cavity, the latter being a vertical void between two wall constructions *Note 1*. Fire resistance is evaluated with the barrier being exposed to fire test conditions from below.

Since the proposed barrier comprises an intumescent material, to seal the 'ventilated air-gap', the integrity of the barrier will not be monitored until after the time at which the intumescent material reacts to seal the gap; as was the case for initial type-testing of CavGuard Roll 65 in WF419878 Issue 3.

4.1 Influence of Alternative Wall Constructions

In the test referenced in Section 3.1, herein, specimen D was installed as a 'cavity barrier' in a 65mm wide cavity that included a 59mm wide air-gap. The test demonstrates that CavGuard Roll 65 can activate to 'close' the 59mm wide air-gap and effectively remain in place under fire test conditions; such that the cavity barrier can satisfy the integrity and insulation criteria of BS EN 1363-1: 2012 (and TGD19) for 60 minutes.

This performance was generated with a specimen whereby both surfaces of the cavity were clad with OSB3, a combustible timber-based board material; and thus representing a relatively onerous arrangement.

It is proposed that CavGuard Roll 65 may be installed in a range of 'cavity walls' formed from differing materials, and with alternative materials facing the cavity; as summarised in Table 1, below.

It is evident that the alternative wall constructions and/or cladding materials exhibit lower levels of combustibility, compared with OSB3; and, in this respect, are less onerous than OSB3. On this basis, the alternative materials can be included within this scope of approval, subject to compliance with the limitations and parameters in Sections 4.2 and 4.3 of this report.

Column A	**Column B**
Inner Wall Construction *Timber-framed wall with one of the following boards on the face towards the cavity* Notes 5, 6 and7	**Outer Wall Construction**
OSB3	Concrete
Calcium Silicate board	Brick/blockwork
Gypsum type board	Pitched-faced or random-faced stone
Cement particleboard	Concrete clad with OSB3, or Cement Particleboard or Calcium Silicate board

Table 1. Summary of Alternative Wall Constructions (see also Sections 4.2. and 4.3)

Any option listed in Column A may be used in conjunction with any option listed in Column B.

Note 5 *In terms of the contribution provided by the inner wall, towards the fire resistance of the CavGuard Roll 65, this report, by IFC, only considers the influence provided by the board facing the cavity; and the inclusion of the underlying timber member. On this basis, this report does not stipulate specifications for the construction of the inner wall; nor are there any limitations regarding the board material forming the internal face of the inner wall (i.e. the board furthest from the cavity). However, the inner wall shall comprise a proprietary timber-framed construction, with direct and applicable fire test evidence to demonstrate that it can provide at least 30 or 60 minutes fire resistance, as applicable, when tested to EN 1364-1; with furnace exposure on either face. Successful evidence must be available for the proprietary construction with the selected facing; see also Section 4.2. The wall must include a timber member on the plane of the cavity barrier; as described in item c of Section 4.2 herein.*

Note 6 *The insulation material used in the void of the inner wall in fire test WF 419878 was a foil-faced PIR material. This did not adversely affect the fire resistance of the CavGuard Roll 65 in the test. This report, by IFC, only considers the contribution provided by the board facing the cavity (and the inclusion of the underlying timber member) and so it is inappropriate for IFC to comment about the influence/contribution of alternative insulation products within the wall construction; other than the need for compliance with note 5, above. It is, however, also the responsibility of other parties to ensure that the insulation material complies with all requirements of the Building Regulations.*

Note 7 *This report does not imply that the tested/assessed details for a particular wall construction should be modified to suit any of the clauses listed in Sections 4.1, 4.2 and 4.3 and the specifications of the tested/assessed wall construction shall already comply with these clauses.*

Staples were proven to fix the CavGuard Roll 65 in the primary test and so stainless steel staples are approved for fixing directly to OSB3; or timber battens. (see Sections 4.2 and 4.3 for further details).

Where the inner wall of the cavity is clad with gypsum boards or calcium silicate boards, the CavGuard Roll 65 shall be fixed with stainless steel screws; engaging into the underlaying timber member (see item c of Section 4.2).

Screw heads will cause a larger 'interruption' to the intumescent materials and it may be perceived that this could adversely affect initial activation or overall efficacy. However, screws were used to fix the cavity barrier in test WF433220, which used the same intumescent material as that in CavGuard Roll 65; and the barrier satisfied fire resistance for 180 minutes.

Although the air-gap in test WF433220 was only 25mm wide, (compared with the 59mm width proposed herein), the intumescent material was only 4mm thick and the performance was 200% greater than that proposed. This test can thus be used to demonstrate that fixing CavGuard Roll 65 with screws would not prevent the intumescent material from effectively closing the air-gap, nor from creating an effective intumescent matrix; providing secondary evidence for approval of CavGuard Roll 65 fixed with screws, for up to 60 minutes fire resistance, in air-gaps <59mm wide.

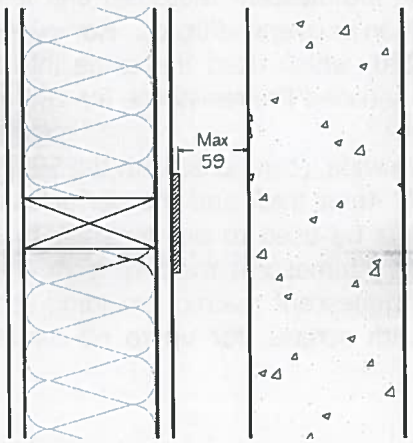
4.2 Specifications for Approved Wall Types

In order to ensure that the CavGuard Roll 65 barrier, as proposed, provides adequate contribution to the proposed fire resistance performance, it is the responsibility of others to ensure that the wall constructions comply with the following parameters:

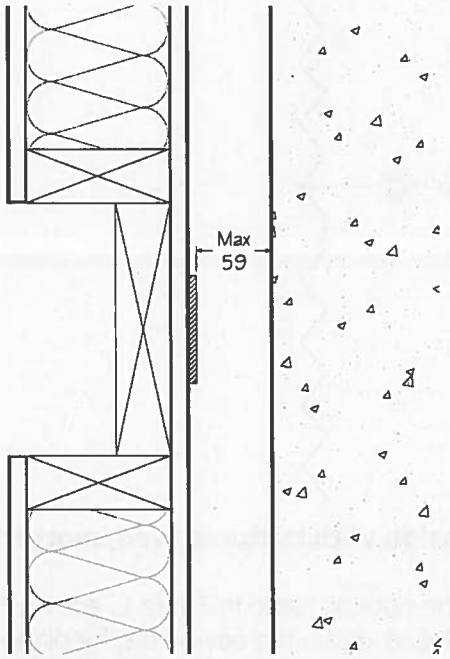
a) OSB board shall be OSB3 grade or better. The grade/density of gypsum plasterboard and calcium silicate board shall be as tested with the selected wall construction, or better. All boards shall be minimum 9mm thickness, or the thickness tested with the selected wall construction; whichever is the greater.

b) Facing boards shall cover the full surface of the inner wall construction facing the cavity; and any joints between boards shall be closely fitted. The boards shall be screwed to the timber framing (see also item c, below). Screw length must be at least 30mm longer than the board thickness. Screws shall be set at maximum 300mm centres in the field and maximum 150mm centres at the perimeter of each board. (If the selected wall construction was tested with longer screws and/or smaller centres, these shall take precedence).

c) Irrespective of the board type employed as facing for the inner wall, a continuous horizontal timber member must be included 'behind' the board on the plane of the CavGuard Roll 65; i.e. within the void of the timber-framed construction. There are many designs for timber-framed buildings and, within the scope of this generic approval for CavGuard Roll 65, it is impractical for IFC to establish individual parameters for a "typical" design of timber-framed wall. However, it is a condition of this report that the timber member on the plane of the CavGuard Roll 65 shall comprise a section at least 35mm high/thick. This member shall either be fitted with its major axis completely across the void within the timber-frame construction, **(as shown on sketch 1a below)**, or with its major axis aligned vertically **(as shown in sketch 1b overleaf)**. In either case, the timber of this member shall be C16 grade softwood, or better, with a minimum density of 350kg/m^3.



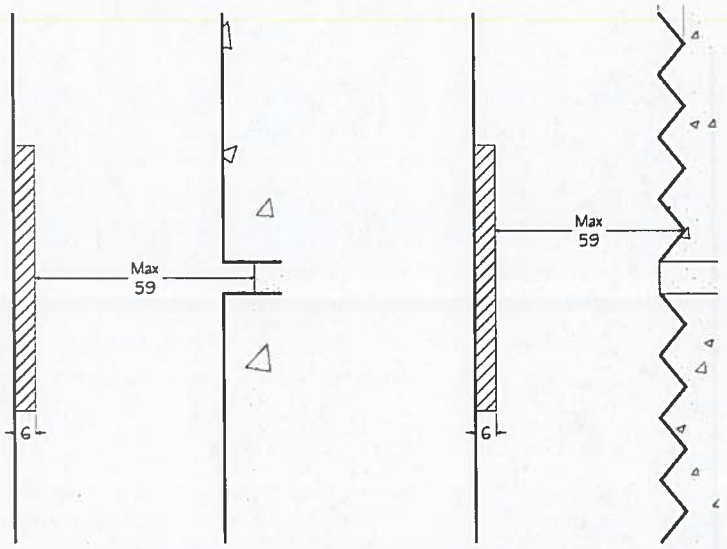
Sketch 1a.
Alignment of timber member within inner wall/position of CavGuard Roll 65



Sketch 1b.
Alternative alignment of timber member within the inner wall/position of Cav Guard Roll 65

d) The stipulation in item c, regarding the need for solid timber on the plane of the cavity barrier, solely relates to its contribution towards the efficacy of the CavGuard Roll 65. It is the responsibility of others to establish and ensure that the timber-framed construction is designed and built to meet the requirements for all other criteria, such as structural stability and fire resistance.

e) Where the outer wall comprises solid brickwork, blockwork or dressed stone, or a combination of the two materials, any mortar joints shall be flush; or recessed by <10mm. **(as shown in sketch 2 below)**. The surface of the wall, facing the cavity, shall ideally be 'flat' but 'pitched' or 'random' dressed stone may include a textured finish. In either case, the difference between 'troughs' and 'crests' of the textured surface shall be no greater than 10mm. In all cases, the maximum cavity dimension (65mm) shall not be exceeded at the bottom of the deepest trough and/or at the bottom of the deepest mortar joint; whichever is the deeper. **(See sketch 2 below).** The sketch shows the CavGuard Roll 65 fixed directly to the inner wall. For the sake of clarity, the 59mm dimension also applies if the CavGuard Roll 65 is fitted to a timber batten; as described in clause 4.3v herein.



Sketch 2. Close-up showing cavity dimension with textured wall/mortar joint.

f) Outer walls must be constructed purely from the options listed in Table 1, above. For the sake of clarity, decorative flint must not be included within the cavity, on the plane of the CavGuard Roll 65 barrier, or within 150mm of the barrier; to avoid potential issues with spalling under fire test conditions.

g) If facing boards are fitted to an outer wall construction formed from concrete, the boards shall cover the full surface of the wall construction facing the cavity. The concrete must be flat and even, so that the boards can be closely fitted to the surface, and any joints between boards shall be closely fitted. The boards shall be fixed to the concrete with screws that are at least 50mm longer than the thickness of the board; set at maximum 300mm centres in the field and maximum 150mm centres at the perimeter of each board.

4.3 Installation Parameters for CavGuard Roll 65

In order to ensure fire resistance performance of the CavGuard Roll 65 barrier, as proposed, it is the responsibility of others to ensure that the following measures and parameters are adopted during installation of the CavGuard Roll 65 barrier:

i) The CavGuard Roll 65 shall only be installed as a horizontal barrier, in a 'cavity' between two vertical wall constructions.

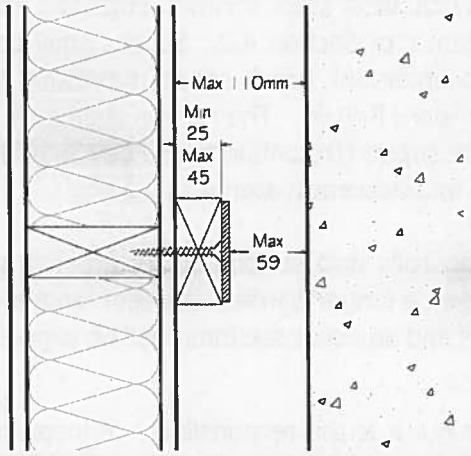
ii) The CavGuard Roll 65 shall be securely fixed to the 'inner' wall (see items v, vi and vii below) so that the rear face of the cavity barrier is in close contact with the face of the wall. If required, a proprietary breather membrane (maximum 0.5mm thick) may be fitted to the inner wall, prior to fixing the CavGuard Roll 65; but the breather membrane must not prevent close contact of the CavGuard Roll 65 with the wall.

Note: The breather membrane used in fire test WF 419878 was Protec TF 200 which is 'F' rated (reaction to fire EN13501-1). This did not adversely affect the fire resistance of the CavGuard Roll 65 in the test but it would be inappropriate to comment about the influence of alternative products with an equal or lower rating. If required, CavGuard Roll 65 could be fixed over breather membranes with class A2-s1 d0, or class A1 rating; but it is the responsibility of others to ensure that this is acceptable and that the vapour barrier complies with all requirements of the Building Regulations).

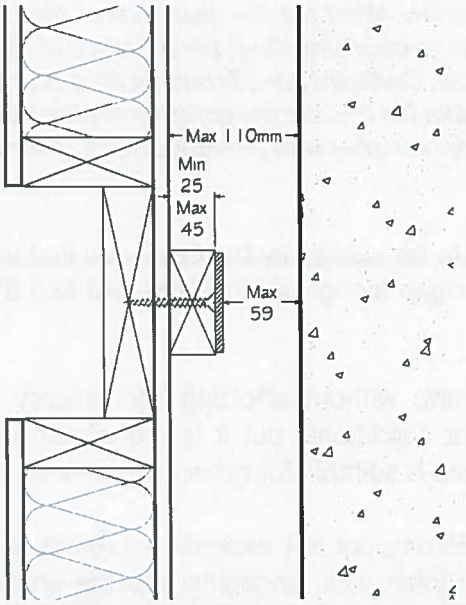
iii) The total width of the cavity (i.e. the space to be 'sealed' by the CavGuard Roll 65) shall be no greater than 65mm; i.e. a 59mm air-gap alongside the CavGuard Roll 65. see sketches herein.

iv) The air-gap width may be less than 59mm, without affecting the efficacy of the CavGuard Roll 65 under fire resistance test conditions, but it is the responsibility of others to determine whether a smaller air-gap is suitable for other performance criteria.

v) If the overall cavity width is greater than 65mm, but not exceeding 110mm, a timber batten shall be screwed to the face of the inner wall; engaging into the underlaying timber member described in item c of Section 4.2. (See sketches 3a and 3b, below) Stainless steel screws to secure the batten must be at least 30mm longer than the thickness of the batten. Screws shall be set at maximum 300mm centres and 50mm from the end of each batten. The batten shall be 80mm deep/high and the thickness of the batten shall be as required to achieve a maximum 65mm wide cavity; although the batten thickness shall not be less than 25mm. The CavGuard Roll 65 shall be fully aligned within the 'footprint' of the 80mm deep batten. Sketches 3a and 3b, below, shows a plain concrete substrate as the outer wall but, for the sake of clarity, the timber batten can be used in conjunction with any of the other options described in Table 1, for the 'outer wall'. In such cases, the limitations regarding the 59mm maximum dimension, shown on sketch 2, also apply.



Sketch 3a. Additional batten on face of inner wall, where cavity width is > 65mm (see clause v, above)



Sketch 3a. Additional batten on face of inner wall, where cavity width is > 65mm (see clause v, above)

vi) Where the inner wall of the cavity is faced with OSB3 board, the CavGuard Roll 65 shall be fixed with steel staples, with minimum 12mm long 'legs'. The staples shall be made from stainless steel but shall otherwise be of the type/size/grade proven in test WF419878 Issue 3. Staples shall be at maximum 150mm centres, and 40mm from the end of the CavGuard Roll 65. These details shall also be employed where the CavGuard Roll 65 is fitted on a timber batten; see item v) above.

vii) Where the inner wall of the cavity is clad with gypsum boards or calcium silicate boards, the CavGuard Roll 65 shall be fixed with stainless steel screws; engaging into the underlaying timber member described in item c of Section 4.2. Screws shall be 5mm diameter x minimum 50mm long, with a countersunk head; set at maximum 300mm centres and 40mm from the end of the CavGuard Roll 65. The screws shall be installed carefully, so that the heads provide adequate support/retention to the CavGuard Roll 65 cavity barrier; without 'pulling-through' the intumescent material.

viii) CavGuard Roll 65 is supplied in 6.3m long rolls and so butt-joints are not usually expected. If butt-joints are necessary, to form a longer barrier, adjacent lengths of the cavity barrier must be closely fitted together; and adjacent sections shall be aligned/level with each other.

The above clauses are based upon tested details but it is the responsibility of installers and other parties to ensure that these methods are sufficient, in practice, so that the CavGuard Roll 65 barrier is effectively and adequately supported.

4.4 General Comment – Cavity Barriers

This assessment evaluates the fire resistance of a cavity barrier as if a 'representative specimen' of the proposed product were installed between two constructions which do not deflect/or move under heating, as was the case with type-testing of the proposed products; and when evaluated against the criteria of the prescribed fire test standard (BS EN 1363-1: 2012 and ASFP TGD19).

The performance of any cavity barrier is dependent upon accurate and consistent alignment of the walls forming the cavity. It is the responsibility of others to ensure that construction tolerances do not result in a cavity that is wider than 65mm.

It is also the responsibility of other parties to ensure that the width of the cavity will not vary in service, under all conditions. If other parties determine that proprietary steel 'straps' or 'ties' should be used, to prevent lateral movement of the outer wall, at least one line of straps/ties shall be positioned 100-200mm above the plane of the cavity barrier; so that the straps/ties are not affected by direct heating under fire test conditions. Locations and centres of other straps/ties shall be defined by others; but there shall be no interruptions to the cavity barrier.

It is the responsibility of others to establish whether the proposed product meets the requirements for fire spread and life safety, as defined in documents such as the Building Regulations, and the Fire Strategy/Risk Assessment for the project. Users of this report are also reminded that performance under fire resistance test conditions should not be used as the sole means of determining the potential fire performance of the element in use; and whether they reflect the actual behaviour in fires. The above principles apply to all cavity barriers; and not just those specific examples proposed herein.

5. CONCLUSION

Based upon the analysis above, if a representative sample of Tenmat CavGuard Roll 65 ventilated cavity barrier, as described in Section 2 herein, were manufactured and installed in accordance with the requirements of this Field of Application Report, and tested for fire resistance using the furnace conditions of BS EN 1363-1: 2012, (together with additional criteria defined in ASFP TGD19), the sample would satisfy the integrity and insulation criteria of the standard for the proposed period 30 or 60 minutes, depending on the maximum fire resistance rating of the composite wall construction within which the CavGuard Roll 65 is installed.

Since the proposed cavity barrier includes a 'ventilated air-gap', the integrity and insulation of the barrier will not be monitored until after the time at which the intumescent material reacts to seal the gap; as defined in ASFP TGD19.

6. DECLARATION BY THE APPLICANT

Reference: IFC Field of Application Report **PAR/21620/01**

We, the undersigned, confirm that we have read and complied with the obligations placed on us by the

Passive Fire Protection Forum (PFPF)

Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products based on Fire Test Evidence

2021

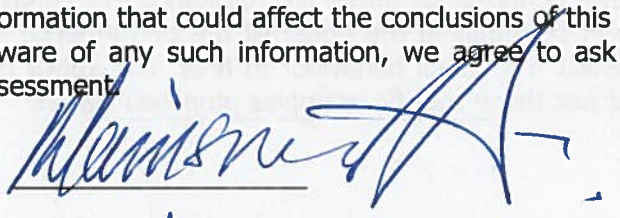
Industry Standard Procedure

We confirm that any changes which are subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.

We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

Signature: 

Name: IAN HAINSWORTH

Position: FIRE TEST ENGINEER

Company: TENMAT

Date: 28/5/2021.

7. LIMITATIONS

This report addresses itself solely to the ability of the proposed Tenmat CavGuard Roll 65 cavity barrier, as described, to satisfy the criteria of the fire resistance test and does not imply any suitability for use with respect to other unspecified criteria. This report is not intended to be a complete specification for the proposed products/assemblies and it is the responsibility of others to ensure that the products/assemblies are suitable for the intended purpose; whilst incorporating the requirements of this report.

This document only considers the barriers described, herein, and assumes that the surrounding construction will provide no less restraint than in the tested assembly; and that it will remain in place and be substantially intact for the full fire resistance period.

This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to International Fire Consultants Ltd (IFC) the assessment will be unconditionally withdrawn and the applicant will be notified in writing. Similarly, the assessment evaluation is invalidated if the assessed arrangements are subsequently tested; since actual test data is deemed to take precedence.

As per the guidance outlined in the Passive Fire Protection Forum (PFPF): *'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products based on Fire Test Evidence, 2021, Industry Standard Procedure',* appropriate action has been taken to mitigate the risk of a conflict of interest arising during the preparation of this report. All individuals involved in the production, or subsequent review, of this assessment have declared any perceived conflicts of interest, with regards to the sponsor or subject(s) of this report, prior to working on this project.

The assessor and reviewer have been deemed suitable for involvement in the production of this assessment in accordance with the guidance outlined in the Passive Fire Protection Forum (PFPF): *'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products based on Fire Test Evidence, 2021, Industry Standard Procedure'.*

The primary test evidence was undertaken to BS EN 1363-1:2012. Whilst this report follows the general guidance for extension of test results, as outlined in EN 15725, this report does not purport to follow the guidance regarding direct or extended application of test results outlined in EN product standards. The approval, herein, shall not be used as supporting evidence for CE marking.

Where the constructional information in this report is taken from details provided to International Fire Consultants Ltd (IFC) and/or from fire resistance test reports referenced herein, it is, therefore, limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed, herein, it should not, therefore, be taken to infer approval of variation in such details from those tested or otherwise approved.

The assessed products/installations have not been subject to an on-site audit by International Fire Consultants Ltd. It is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations, herein.

The analysis and conclusions within this report are based upon the likely fire resisting performance of a barrier that is manufactured and installed in accordance with this document; and offered for fire resistance testing in 'perfect' condition. In practice, management procedures must be in place in any building where the barriers are installed, to ensure that no parts of the barrier, or the adjacent wall surfaces, are damaged or faulty.

Any such shortfalls, in respect to the condition of the barrier/walls, will invalidate the approval by IFC; and may seriously affect the ability of the assemblies to provide the required level of fire resistance performance. Determination of what constitutes wear or damage, and any corrective actions in order to return assemblies to the required condition, should only be carried out following consultation with the manufacturer and IFC.

Any materials specified in this report have been selected and judged primarily on their fire performance. IFC do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations. Designers, manufacturers and installers are reminded of their responsibilities under the CDM Regulations; but particularly with regard to installation and maintenance of inaccessible items.

This Report is provided to the sponsor on the basis that it is a professional independent engineering evaluation as to what the fire performance of the construction/system would be should it to be tested to the named standard. It is IFC's experience that such an evaluation is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless IFC have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, IFC cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and IFC cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

8. VALIDITY

This Field of Application Report has been prepared based on International Fire Consultants Ltd's present knowledge of the products described, the stated testing regime and the submitted test evidence.

The assessment is valid initially for a period of five years after which time it is recommended that it be submitted to International Fire Consultants Ltd for re-evaluation. For this reason, anyone using this document after May 2026 should confirm its ongoing validity.

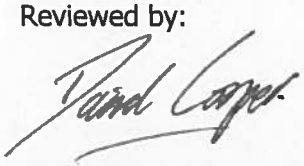
This assessment report is not valid unless it incorporates the declaration, in Section 6, duly signed by the applicant.

Prepared by:



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International Fire Consultants Ltd (IFC)

Reviewed by:



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