# Testing Framework Guide - Siderise CW-FS Firestop for curtain walling applications

SIDERISE

**Siderise CW-FS Firestop functioning as a perimeter seal – horizontal application**

Diagram illustrating the relationship between statutory and industry compliance guidance, classification standards and applicable firestop testing methodologies in England and Wales

Compliance and acceptance of project-specific designs require a holistic review and clarification by the Project Design Team, with support from a qualified and competent Project Fire Engineer.

In curtain walling applications the overarching authority should consider a justified approach reviewing all elements including (but not limited to);

- Building use and occupancy
- Building height
- Active fire protection
- Strategy in a fire event
- Façade design
- Materials and components
- Firefighting access

Main fire routes (external, internal and via the façade) will be holistically reviewed in each project case.

This framework is based on guidance in Approved Documents B (Fire safety) to outline relevant testing methodologies for horizontal firestops / perimeter seals used to the rear of curtain wall façades, which can form one part of a justified approach.

As curtain walls are not typically considered as common building scenarios in Approved Document B, other guidance documents need to be applied where relevant e.g. BS 9999, BS 9991, HTM05/02 and BB100, which have alternative or different approaches to facade performance requirements.

Where applicable, additional regulatory and industry guidance should also be reviewed e.g. CWCT TN115.

*Building Regulations, 2010, Schedule 1, Part B Requirements B3 (Internal fire spread) and B4 (External fire spread)*

*Approved Documents B (Fire safety) Volumes 1 & 2, 2019 + 2020, 2022, 2025 amendments*

*BS 476-20: 1987*

To be withdrawn September 2029.

*BS EN 13501-2: 2023 (Fire classification of construction products and building elements. Classification using data from fire resistance and / or smoke control tests, excluding ventilation services)*

Stipulates that curtain wall perimeter seals must be tested to either BS EN 1364-3 or BS EN 1364-4.

Specialist guidance advocates BS EN 1364-4: 2014 as best practice for evaluating the fire resistance performance of perimeter seals:
ASFP Advisory Note 7
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BS EN 13830: 2015+A1: 2020
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EAD 350141-00-1106

*BS EN 1364-4: 2014*

It is recommended that perimeter seals are subjected to cyclic movement testing before in-test fire exposure in accordance with EAD 350141-00-1106.

*BS EN 1364-3: 2014*

Type B 'fire-rated' curtain walling in the UK is rare. Type A 'non-fire rated' is more common.
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BS EN 1364-3 cannot be used with Type A (non fire rated) curtain wall and is therefore not relevant.

*BS EN 1366-4: 2021*

Curtain wall perimeter seals excluded from scope.
NB Testing conducted to this standard in some cases can form part of an engineering assessment.

*Non-fire rated curtain wall (Type A)*

*Configuration 5*

*Fire-rated curtain wall (Type B)*

B 'fire-rated' curtain walling in the UK is rare. Type A 'non-fire rated' is more common. BS EN 1364-4 can be used with Type A (non fire rated) curtain walls.

*Assessment*

ASFP Advisory Note 17
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Position paper on assessments and technical evaluations in lieu of fire testing.
-
PFPF Guide to Undertaking Technical Assessments of Fire Performance.

*EXAP EN 15254-6: 2014*

BS EN 1364-4: 2014 refers to BS EN 15254-6: 2014 for additional scope and extended field of application rules.

*DIAP*

Direct field of application rules to BS EN 1364-4: 2014
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Listed product parameters as per CW-FS Technical Datasheet
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DIAP allows for small changes to be permitted from the tested arrangement depending on performance outcome.

*Manufacturer's technical evaluation* can cover a variation to the standard perimeter seal installation requirements; similar perimeter seal arrangements to existing test data; and similar perimeter seal penetration interfaces to existing test data. NB must always be supported by test evidence in the form of a test report.

**CW-FS Firestop**

e.g. CW-FS120, functioning as a perimeter seal, achieves a fire resistance performance of 120 minutes integrity and insulation, and has a 10% movement capability to EAD 350141-00-1106

European Technical Assessment

Certificate of compliance

Listing report

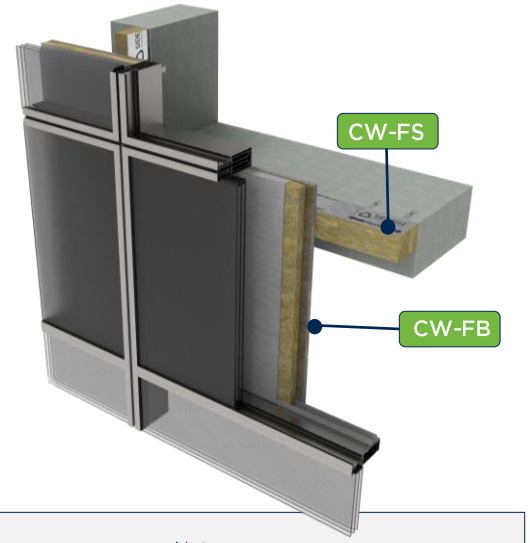
**CW-FB Fireboard**

Facilitates the test by providing fire protection to the inner face of the test assembly in the spandrel zone.

Enhances the performance of curtain walling test assembly.

Enables the perimeter seal to fully perform its function.

Does not result in a measured EI classification of the spandrel assembly.




Note;
Image above is an indicative illustration only to demonstrate a typical Curtain Walling arrangement.
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BS EN 1364-4 (Configuration 5) is used to determine the performance of the perimeter seal itself (i.e. fire stop).

The full façade arrangement is to be reviewed as part of a fire engineered solution.

**Primary** testing and third-party certification is to BS EN 1364-4, directly in accordance with the standard, the firestop is tested between the floor construction and a curtain walling assembly.

Siderise can provide additional **Supplementary** evidence where available, to aid the Design Team in their holistic review. For example;

- Siderise CW with facade bracket interfaces BS EN 1366-4
- Siderise CW to end of flexible wall BS EN 1366-4
- Siderise CW tested to ASTM E2307
- Siderise CW tested to BS EN 1366-4

Please see next page for further guidance.

Compliance and acceptance | Framework | Siderise products Tested to standard | Not relevant to the given application | Explanatory Information | Third-party certification | Being Withdrawn | Specialist guidance: CWCT proposed approaches to curtain wall firestopping

v1.03 – August 2026

# Testing Framework Guide - Siderise CW-FS Firestop for curtain walling applications

**Siderise CW-FS Firestop functioning as a perimeter seal – horizontal application**

Additional considerations for the relationship between statutory and industry compliance guidance, classification standards and applicable firestop testing methodologies in England and Wales

Continued

Compliance and acceptance of project-specific designs require a holistic review and clarification by the Project Design Team, with support from a qualified and competent Project Fire Engineer.

In curtain walling applications the overarching authority should consider a justified approach reviewing all elements including (but not limited to);

- Building use and occupancy
- Building height
- Active fire protection
- Strategy in a fire event
- Façade design
- Materials and components
- Firefighting access

Main fire routes (external, internal and via the façade) will be holistically reviewed in each project case.

This framework is based on guidance in Approved Documents B (Fire safety) to outline relevant testing methodologies for horizontal firestops / perimeter seals used to the rear of curtain wall façades, which can form one part of a justified approach.

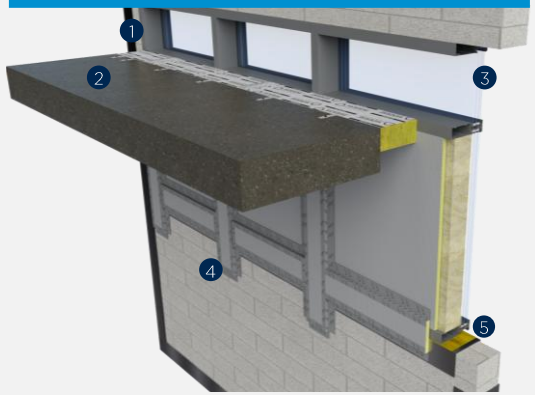
As curtain walls are not typically considered as common building scenarios in Approved Document B, other guidance documents need to be applied where relevant e.g. BS 9999, BS 9991, HTM05/02 and BB100, which have alternative or different approaches to facade performance requirements.

Where applicable, additional regulatory and industry guidance should also be reviewed e.g. CWCT TN115.

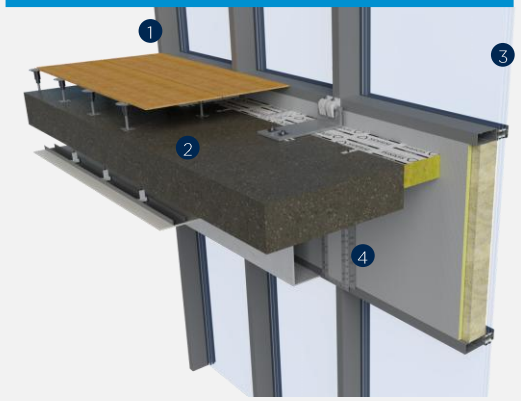
## Additional considerations

It is important to note the differences between tested arrangements and real-world conditions. Key variables are highlighted below.

*Tested arrangement*




*Real world*




1. Curtain walling elements can differ.
2. Floor arrangement can differ.
3. Arrangement size and configuration can differ.
4. In the test arrangement, CW-FB is applied to all of the assembly exposed to fire, lapping onto the surrounding furnace structure, whereas in practical application CW-FB is localised to the spandrel zone. A fire engineered solution is to be applied and the arrangement reviewed holistically.
5. The blockwork wall used in test to contain the fire to an internal environment using ISO 834 fire curve (more onerous than an external fire curve).

**Siderise position**

Due to the above we recommend following the tested detail as closely as possible including protecting the spandrel zone.

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The responsibility of Siderise as a product manufacturer is to provide guidance and information.

**Designer duties**

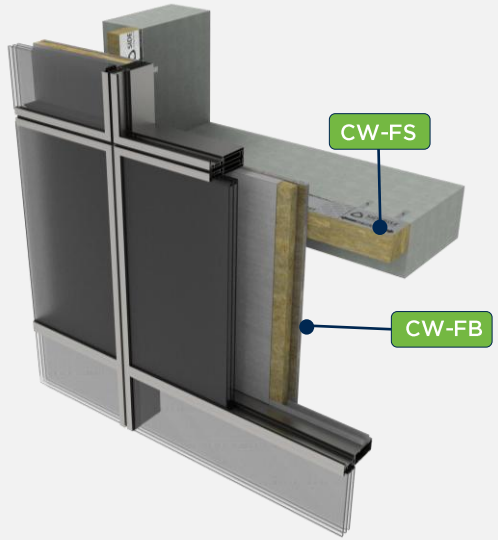
Designers are expected to take every reasonable step to ensure the design work on a project demonstrates compliance with the Building Regulations and that the design is robust.

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It is a legal requirement to satisfy the functional requirements of Schedule 1 'B3 – Limit internal fire spread' and 'B4 – Limit external fire spread'.

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In addition to the legal requirements, designs must comply with the project specific fire strategy in consideration with the relevant passive and active protection systems.




**Do I need to protect the spandrel? (UK Documents)**

Approved Documents B do not prescribe a protected spandrel.

However, they do lead to BS EN 1364-4: 2014 via BS EN 13501-2: 2023 where fire protection of the inner face of the curtain wall in the spandrel zone is required to allow the test to be conducted.

As Curtain Walls are not typically considered as common building scenarios in Approved Document B, other guidance documents need to be applied where relevant.

**Supplementary test data**

Test standards used in other global jurisdictions (ASTM E2307 and ASTM E2874) that are designed to replicate a fully developed fire, subject the spandrel assembly (including the perimeter seal and the lower transom) to fire exposure from inside and outside the compartment, emulating break-out through the window and leapfrog to the floor above.

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CW-FS120 to the rear of a protected spandrel construction has demonstrated its ability to maintain its fire resistance for over 2 hours in these conditions.

**Leapfrog - break-out / break-in**

When using a non-fire rated façade with aluminium profiles and non-fire resisting glazing, there is risk of fire break-out through the spandrel panel at the underside of the firestop and subsequent break-in above if the spandrel is not protected.

Through this mechanism there is the potential for fire to spread vertically over the façade exterior to a room's interior on the floor above the compartment of origin.

# Testing Framework Guide - Siderise CW Cavity Barrier & Firestop for curtain walling applications

SIDERISE

**Siderise CW Cavity Barrier & Firestop – vertical application**

Diagram illustrating the relationship between statutory and industry compliance guidance, classification standards and applicable cavity barrier and firestop testing methodologies in England and Wales

Compliance and acceptance of project-specific designs require a holistic review and clarification by the Project Design Team, with support from a qualified and competent Project Fire Engineer.

In curtain walling applications the overarching authority should consider a justified approach reviewing all elements including (but not limited to);

- Building use and occupancy
- Building height
- Active fire protection
- Strategy in a fire event
- Façade design
- Materials and components
- Firefighting access

Main fire routes (external, internal and via the façade) will be holistically reviewed in each project case.

This framework is based on guidance in Approved Documents B (Fire safety) to outline relevant testing methodologies for horizontal firestops / perimeter seals used to the rear of curtain wall façades, which can form one part of a justified approach.

As curtain walls are not typically considered as common building scenarios in Approved Document B, other guidance documents need to be applied where relevant e.g. BS 9999, BS 9991, HTM05/02 and BB100, which have alternative or different approaches to facade performance requirements.

Where applicable, additional regulatory and industry guidance should also be reviewed e.g. CWCT TN115.

*Building Regulations, 2010, Schedule 1, Part B Requirements B3 (Internal fire spread) and B4 (External fire spread)*

*Approved Documents B (Fire safety) Volumes 1 & 2, 2019 + 2020, 2022, 2025 amendments*

*BS EN 13501-2: 2023 (Fire classification of construction products and building elements. Classification using data from fire resistance and / or smoke control tests, excluding ventilation services)*

*BS 476-20: 1987 (Fire tests on building materials and structures - Method for determination of the fire resistance of elements of construction (general principles))*

To be withdrawn September 2029.

*BS EN 1366-4: 2021 (Fire resistance tests for service installations - Linear joint seals)*

*BS EN 1364-3: 2014 (Fire resistance tests for non-loadbearing elements - Curtain walling. Full configuration (complete assembly))*

Type B 'fire-rated' curtain walling in the UK is rare.
Type A 'non-fire rated' is more common.
Assesses fire resistance performance of curtain wall test assembly incorporating vertical linear joint seal - not seal itself.
CW-FS Firestop can be used to the rear of fire-rated curtain walling.

*Assessment*

ASFP Advisory Note 17
-
Position paper on assessments and technical evaluations in lieu of fire testing.
-
PFPF Guide to Undertaking Technical Assessments of Fire Performance.

*EXAP*

BS EN 1366-4: 2021 refers to BS EN 15882-4: 2012 for additional scope and extended field of application rules.

*DIAP*

Direct field of application rules to BS EN 1366-4: 2021
-
Listed product parameters as per CW-FS Technical Datasheet

**CW-CB Cavity Barrier and CW-FS Firestop**

Functioning as vertical linear joint seals.

Third-party certification IFCC 1763

Third Party Certificates remain the primary and most appropriate form of product verification. This certification confirms that the underlying test evidence has been independently assessed and validated by accredited bodies and are publicly available via our website. In line with industry guidance (ASFP Advisory Note 34).




Note;
Image above is an indicative illustration only to demonstrate a typical Curtain Walling arrangement.
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The EN 1366-4 test Standard is designed and intended to determine the performance of the linear joint seal itself (i.e. the cavity barrier), rather than the bounding substrates - options to test with different substrates directly in accordance with the Standard, are limited.

**Primary** testing and third-party certification, directly in accordance with the standard, is typically concrete to concrete.

The Project Design Team should clarify the overall design, including the bounding substrates.

Siderise can provide additional **Supplementary** evidence where available, to aid the Design Team in their holistic review. For example;

- Siderise CW to end of flexible wall.

**The full façade arrangement is to be reviewed as part of a fire engineered solution.**

Compliance and acceptance | Framework | Siderise products Tested to standard | Not relevant to the given application | Explanatory Information | Third-party certification | Being Withdrawn