Technical bulletin

Estonian Rescue Board

Bulletin Title: Estonian testing requirements for open state cavity barriers

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Product / System: Siderise RH Rainscreen Horizontal Open State Cavity Barrier & RV Rainscreen Vertical Cavity Barrier

Department: Technical

Status: Guidance

1. Purpose of This Bulletin

This technical bulletin has been issued to provide guidance on testing requirements and supporting evidence in Estonia.

It is intended to clarify the testing and certification that supports Siderise open state cavity barriers for use in rainscreen applications, and how they relate to the Estonian building standards to ensure that the relevant parties understand the applicable product requirements, installation considerations and performance implications.

2. Scope and Applicability

This bulletin applies to:

- **Products:** Siderise RV & RH Cavity Barriers
- **Applications:** Rainscreen Open State Facades
- **Building types:** High Rise Applications
- **Audience:** Specifiers, Approval Authorities
- **Geographical scope:** Estonia

This bulletin should be read alongside the relevant product datasheets, installation instructions, declarations of performance, assessment documents and other applicable technical information.

3. Technical Background

Estonian Rescue Board has requested via Siderise's distributor an explanation of the distinction between reaction to fire and fire resistance and requesting clarification on the basis on which projects are currently being approved, and its relation to SP FIRE 105.

4. Technical Guidance / Requirements

4.1 Technical Explanation

SP FIRE 105 – What it means for Estonia

SP FIRE 105 is a Swedish full-scale façade fire test designed to assess how fire spreads across and within an external wall system. It is particularly relevant to combustible façade materials, external insulation systems, rainscreen cladding and cavity barriers.

For Estonia, the important distinction is that SP FIRE 105 is a recognised European façade fire test method, but it is not automatically an Estonian regulatory requirement or approval route.

This matters for a construction products manufacturer seeking to demonstrate the fire performance of a façade system or cavity barrier in the Estonian market.

4.2 Requirements and Recommendations

What does SP FIRE 105 test:

1. The test was developed in Sweden and is operated by organisations including RISE Research Institutes of Sweden.
2. It simulates a developed compartment fire breaking out through a window and exposing the external façade to flames.

Test parameter	Description
Test specimen	Approximately 4 m wide × 6 m high.
Fire source	60 litres of heptane.
Fire duration	Approximately 15–20 minutes.
Fire exposure	Flames projecting from a simulated apartment window.
Assessment	External and internal fire spread, falling debris, temperatures and heat flux.
Test subject	Complete façade assembly rather than an individual material.

3. What constitutes a successful test?

   The original SP FIRE 105 Issue 5 includes the following performance criteria:

Performance criterion	Requirement
Vertical fire spread	Fire and damage must not extend beyond the bottom of the second window level above the fire compartment
Falling components	No large façade components may fall
Eaves temperature	Must not exceed 500°C for more than 2 minutes or 450°C for more than 10 minutes
Heat flux	Must not exceed 80 kW/m² at the specified window measurement position where the additional criterion applies

   Importantly, SP FIRE 105 does not produce a conventional Euro class rating such as A1, A2-s1,d0 or B-s1,d0. It demonstrates how a particular assembled façade performs against the test criteria.

4. Standards, Regulations and Supporting Evidence

Estonia operates under its own national building fire safety requirements, supported by Estonian and European standards.

The relevant framework includes:

- EVS 812-7:2018 – Fire Safety of Constructions, Part 7: Fire Safety Requirements for Buildings. This includes guidance on limiting fire spread in insulated façade systems.
- EVS-EN 13501-1 – Reaction-to-fire classification of construction products.
- EVS-EN 13501-2 – Fire-resistance classification of building elements.
- **EVS-EN 1364-6:2025 – Fire-resistance testing of open-state cavity barriers.**

Estonia's EVS 812-7 permits special fire safety solutions to be demonstrated analytically, provided the essential fire safety requirements are satisfied.

Estonia's regulations don't specifically mandate SP FIRE 105 or establishes automatic acceptance of a successful test.

That means a successful SP FIRE 105 test may provide useful supporting evidence.

Document Reference	Title / Description	Purpose / Relevance
Spec ID 66975 - Intertek UK	Intertek 3rd Party Certification EN 13501-1:2018	Reaction to fire classification
IFCC 1712 - IFC Certification	IFC 3rd Party Certification TDG19 & EN 1366-4:2006 +A1:2010	Product fire resistance

for an Estonian project, but the local designer and approving authority would need to establish its acceptability.

What does this mean for open state cavity barriers.

This is particularly important for open-state cavity barriers used within ventilated façades.

Test standard, what it demonstrates

- SP FIRE 105, Fire spread performance of the complete façade system
- EN 1364-6 (TDG19), Fire resistance of an open-state cavity barrier
- EN 13501-1, Reaction-to-fire classification of a construction product
- EN 13501-2, Fire-resistance classification based on applicable tests

The recently published Estonian adoption of EN 1364-6 specifically explains that testing an open-state cavity barrier does not establish the fire performance of the complete external façade. Its results can instead support the evidence for an otherwise acceptable façade system.

Equally, a successful SP FIRE 105 test incorporating a cavity barrier does not automatically provide an independent EI 30, EI 60 or EI 120 classification for that barrier.

5. Design Considerations

SP FIRE 105 is not a mandatory test for a manufacturer selling open-state cavity barriers or fire stops into Estonia.

The critical distinction is between the fire performance of an individual passive fire protection product and the fire performance of a complete external façade system.

SP FIRE 105 is principally a full-scale façade fire test. It is not a dedicated product fire-resistance test for cavity barriers or fire stops.

For a manufacturer such as Siderise, I would distinguish between three separate requirements:

Requirement	Relevant test or evidence
Open-state cavity barrier fire resistance	EN 1364-6, where applicable
Linear joint fire stopping	EN 1366-4, where applicable
Complete façade fire spread performance	SP FIRE 105, where required for the façade system

A product manufacturer should not automatically be expected to commission SP FIRE 105 testing simply because its cavity barriers or fire stops are incorporated into a ventilated façade.

The important distinction for Estonia

Estonian standards body, EVS, adopted EVS-EN 1364-6:2025 on 17 February 2025. Its scope specifically covers horizontal and vertical open-state cavity barriers, including an optional flame-exposure criterion for façade applications.

By contrast, RISE describes SP FIRE 105 as an assessment of complete façade systems, including flame spread, falling components, eaves temperatures and radiation.

This supports the position that these are different tests addressing different performance characteristics.

When might SP FIRE 105 become necessary?

It could become necessary where:

- A particular façade system is being approved using SP FIRE 105 evidence.
- The project fire engineer specifies the test.
- A façade manufacturer requires the barrier to be included in its tested system.
- The Estonian approving authority requires additional system-level evidence for a particular design.

Even in those circumstances, the testing obligation would generally concern the complete façade arrangement, not automatically every individual component manufacturer.

Siderise technical compliance package containing relevant EN fire-resistance test evidence, classification reports, installation details, application limitations and applicable CE-marking or ETA documentation, will support market requirements

A project fire engineer can evidence that the supporting data is acceptable for the intended application.

This does not rule out project-specific requirements, and it does not that EN 1364-6 testing alone satisfies every Estonian regulatory obligation.

SP FIRE 105 may be required to substantiate the performance of a particular façade system, but it should not be treated as a universal prerequisite for open-state cavity barriers or fire stops in Estonia.

6. Limitations and Conditions of Use

The guidance contained in this bulletin is based on the information and evidence identified within this document.

The suitability of a product or system must be assessed against the specific project requirements, substrate, installation conditions and intended application.

Where project-specific advice is required, consult the company's Technical Department before proceeding.

This bulletin does not replace project-specific design responsibility, applicable statutory requirements or the manufacturer's current installation instructions.

7. Required Actions

This bulletin is for information only. No action is required.

8. Further Information and Technical Support

For further information, clarification or project-specific advice, contact:

Department: Technical Services
Company: Siderise Insulation Ltd
Email: technical.services@siderise.com

Telephone: +44 1656 730 833 - option 3
Website: https://www.siderise.com/

Please quote the bulletin reference when making an enquiry.

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End of Technical Bulletin