

IMPROVING BUILDING VALUE THROUGH FAÇADE WEATHERPROOFING

1.0 Intro

1.1 Improving building value by sealing façade connections

1.2 Sealing façade connections – Raising the standards: state-of-the-art solutions



1.3 Sealing façade connections – Improving building value with complete, tested and approved systems

A - Complete, tested and approved systems

Façades are traditionally designed to last and to withstand aggressive events, such as strong winds or heavy rain. Façade systems can be engineered to offer reasonable degrees of resistance to these effects, and it is only possible to achieve such degrees of durability and resistance, if the different components of the façade can, individually, guarantee these levels of durability and resistance.

When an architect, engineer or contractor, has defined, in general terms, the type of solution that is most adequate to each specific sealing detail, and its essential characteristics. Before selecting a specific manufacturer or brand, the architect, engineer or contractor, should confirm that:

- The solution to be specified in detail, is a complete and integrated solution, not only an isolated product without the specific accessories to be applied with and without options to fulfil special project requirements;
- The quality of each one of the solution components is under certification and control;
- The solution is tested and approved as a system (main components + accessories), as well as its application method, considering its typical applications.

▪ Complete systems

A complete system is a set of main components and accessories, with clearly defined application procedures or routines to perform a specific duty or solve a problem.

This is completely different from an isolated product. Within a system, all the necessary accessories to completely install the product will be included, in accordance with the defined system installation methodology, within the system scope of application. A system will, most of the times, also have different system options, to allow the adaptation of the system to specific project requirements.

For example, a system for sealing façade connections, based on EPDM weatherproofing membranes, will be comprised of:

- Main Component - Weatherproofing membranes
- Main Component Variations – To the application of the system on different conditions, or according with different project requirements
- Pre-fabricated pieces – Corners or complete collars
- Cleaner - To properly clean all surfaces before installation
- Primer – To properly prime porous or difficult surfaces, prior to installation
- Adhesives – To adhere the main components to different surfaces, or to seal main components' joints, or other details

Having a complete system, a clear definition of all its components and application methods, will significantly reduce the possibility of error or chemical incompatibilities. It will also make the architect's, engineer's or contractor's job much easier and safer.

Confirming the compatibility of this system with other construction systems with which it will interact is crucial, as well as the support from the supplier / manufacturer to understand the best system option and application method for each specific project and detail – this understanding and specification may significantly reduce human error possibilities during installation or the amount of required labor.

▪ Tested and approved systems – Quality assurance

Quality assurance is a set of planned and systematic actions, made to ensure that products and services comply with specified requirements. It not only involves checking the final quality of products to avoid defects, but also checking product quality in a planned way, during all its production stages. Quality assurance comprises the development of work and product design procedures, to prevent errors from occurring, based on planning backed up by quality manuals and tools.

The quality assurance of a system or product production is necessary to increase customer confidence in that the product will perform as promoted by the manufacturer and as he is expecting.

Individual product approvals

The first step is to always ask for the technical specifications of each product that is part of the system, certified by a third party. This can be achieved for example, through the mandatory CE marking of regulated products.

CE marking implies that a product complies with relevant safety, health or environmental regulations, across the European Economic Area.

Assessment will need to be CE marked and accompanied by a [Declaration of Performance \(DoP\)](#). This is intended to ensure that reliable technical information is provided about the performance of construction products in a common technical language and tested using consistent assessment methods. This consistency should also enable designers and specifiers to compare the performance of products more easily.

The DoP of a product that is suitable for sealing façade connections, usually provides the following information:

- Reaction to fire
- Resistance to water passage
- Water vapour properties
- Resistance to air passage
- Tensile strength
- Elongation
- Tear resistance
- Dimension stability
- Foldability at low temperatures
- Weathering by combined continuous stress, through UV exposure and high temperatures

The CE marking will also confirm that product is under periodical control and that products are tested periodically.

System approvals

However the type of certification described previously guarantees only the product essential characteristics, and its production control. It says nothing about how this will perform with any accessory used to apply it, or about how this material will perform together with other building components. It does not harmonize the product with building regulations or recommend what products are appropriate for a project - responsibility that remains with designers, specifiers or contractors.

Façade connection sealing systems can also have a certification from a third part, specially when these are innovative solutions.

There are several certification bodies that have certification methods, defined to test and approve such systems and their application methods. Some examples:

- [Cahier de Charges - Socotec](#)
- [Avis Technique – CSTB](#)
- [IAB - Irish Agrément Board](#)
- [BBA – The British Board of Agreement](#)

These type of approvals are usually a mark of quality, safety and reliability. They will provide reassurance of the product's fitness-for-purpose. These usually provide the following information, which is most valuable to designers and contractors:

- Purpose of the solution and scope of the certification
- Product overview and product characteristics (including system accessories)
- Field of application
- Application guidelines (main directives, different supports, repairs, compatibility, etc.)
- Test results and final certification

B - The purchase department – Demanding quality

The characteristics/standards of the construction materials need to be put down in product specifications and purchase orders, in unambiguous terms. The testing and inspection methods/procedures, the type of tests that are required to be conducted, all need to be specified accurately.

The purchase department can achieve the required quality of incoming construction material by:

- Conveying correct specifications;
- Assessing quality capability of the supplier before placing a purchase order;
- Insisting on proper certification of dispatched material, from the supplier's facility;
- Proper packaging and transportation, to avoid deterioration, damage or breakage during transit;
- Testing and inspecting at the receiving end. Insisting on approved quantity and quality certificates;
- Proper storage in the warehouse/store, to avoid deterioration or damage during storage;

All these steps, used appropriately, help in insuring the right quality of the incoming construction materials; which ultimately reflects in the final product of the company.



The Effisus Way – Effisus Ecofacade

Membrane options:

- Effisus Ecofacade Membrane – Standard weatherproofing membrane
- Effisus Ecofacade SA-Edge Membrane – Weatherproofing membrane with one or more embedded self-adhesive bands for application without the need for additional adhesives.
- Effisus Ecofacade P-Fix Membrane – Weatherproofing membrane with a quick-connection profile for fastening to the frame or facade without the need for additional accessories.
- Effisus Ecofacade SA-Edge + P-Fix Membrane – Weatherproofing membrane with self-adhesive band and quick-connection profile for applications without the need for accessories.



System accessories:

- Effisus Bonding KF Adhesive – Paste adhesive
- Effisus Bonding KF+ Adhesive – Paste adhesive with no solvents
- Effisus Coat NP Primer – Primer for porous substrates
- Effisus Setup PR – Cleaner for smooth surfaces
- Pre-fabricated corners – For quick installation without error
- Pre-fabricated collars or other pieces – Fully project customization

Cahier des Charges SOCOTEC – Ce procédé a fait l'objet d'une enquête technique n° DTM-B/13/535FV/FD valable jusqu'au 01/04/2016 dont les conclusions sont reconnues par l'ensemble des collaborateurs de SOCOTEC France.

CE Certification - Results of factory production control are according to the characteristics declared in the CE Specification Sheet. Standard - EN 13859-2

Effisus Ecofacade Envelope Air tightness and water vapor management facade integrated system.

[Effisus Ecofacade Facade waterproofing solution.](#)

