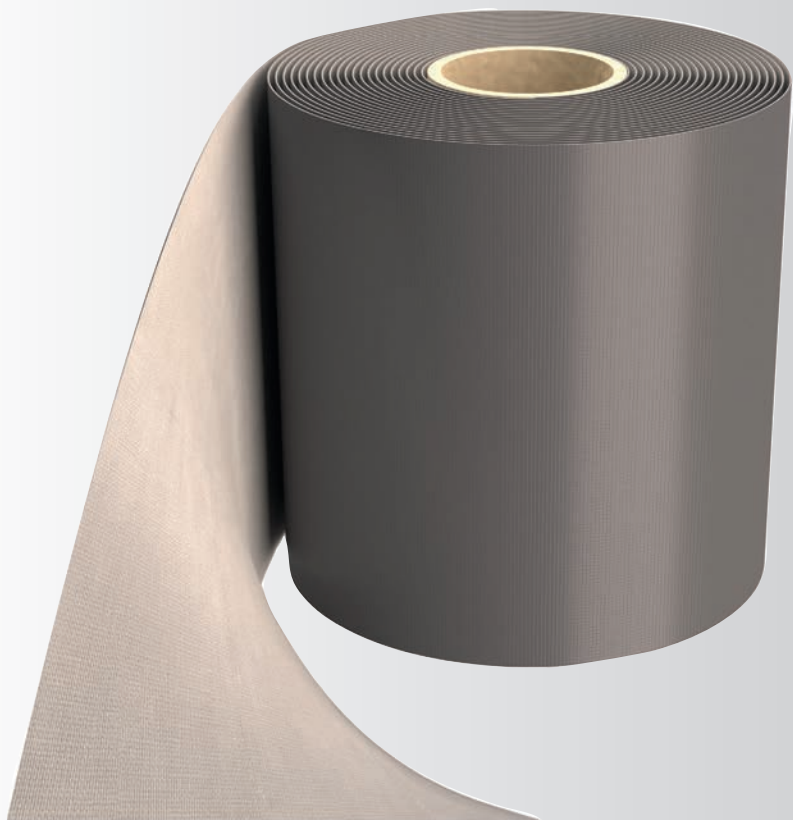


TEROSON®

A sealing solution considering all 4 elements



TEROSON FO 2 FR

The first facade sealing strip with fire-retardant properties

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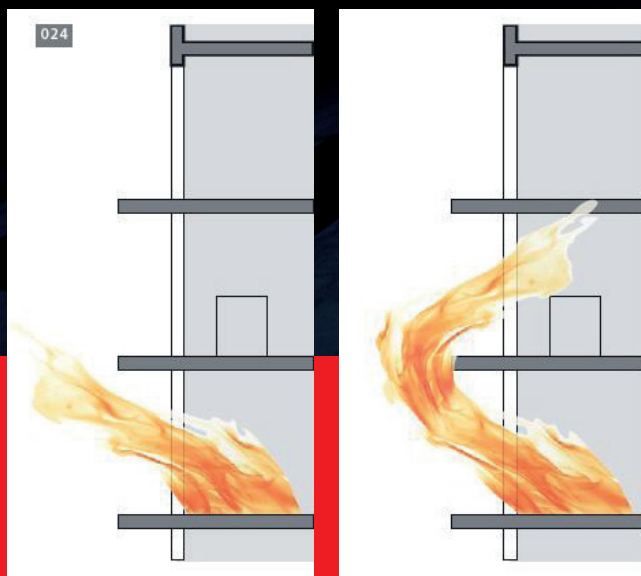


Only safe buildings are sustainable buildings

A defective refrigerator, 71 fatalities. We can't forget the tragic Grenfell Tower fire in London, that reminded us how crucial it is to address the issue of structural fire safety in construction. The evacuation of the „Hannibal“ residential complex in Dortmund in September 2017, or of a high-rise residential building in Wuppertal in June of the same year, incidents like these draw attention to the need for robust fire protection in densely populated urban areas.

These examples highlight: If you want to build in an economically sustainable way, you have to build safely. The increasing tendency to build buildings higher and closer together, especially in urban areas, highlights the need for efficient fire protection concepts. Fires can quickly spread from inside a building to its outer envelope, making the choice of facade material of great importance.

Until recently however, there has been no solution for sealing and, in particular, for facade connection strips that offers permanent protection against both weathering and fire. But now, for the first time, a sealing film system has been certified as flame-retardant (B s2, d0). This new product development takes on a pioneering role for the field of detail sealing on the outer building envelope.



Assumed and actual shape of the flames.



Facts & figures

362

deaths on average from
smoke, fire and flames in
Germany per year.

(2009-2019, source: Federal Statistical Office)

Fire smoke gases
cause injuries to around

6,000

people each year,
with long-term
damage to
their health.



(95 %)

of deaths were due to
the highly toxic smoke
gases caused by fire.

3 Mio.

In addition to human lives, there are also
economic losses: private assets
of around 3 million euros per year are
destroyed, and annual industrial fire
damage amounts to as much as
around 2 billion euros.

A decision in favour of fire protection is not a decision against reliable weather protection

When it comes to fire protection, the facade is a crucial element. The fire in Grenfell Tower was able to spread rapidly through the façade. In addition to the requirement to prevent a fire from starting, containing the spread of fire is an important task of the building envelope.

The focus is usually on the fire-retardant properties of the facade materials and the insulation used, but sealing is also an important element that should not be neglected.

Particularly in the area of facade connection films, there was previously no solution on the market that offered a high level of fire protection in addition to reliable weather protection and ease of use for installers.

Until now, anyone who attached importance to fire protection had to make do with roofing materials, but these are far from ideal. Although on paper they meet the minimum requirements for moisture protection and offer the desired fire protection, they are hard to work with on the vertical façade, are not stable in the long term and are very prone to faults.

Until now, there was no tested system consisting of sealing foil plus adhesive that offered a high level of protection in the event of fire. But now, TEROSON Bautechnik has become the first supplier on the market to develop an elastic, vapor-open façade connection foil, that not only excels in weatherproofing, but additionally meets the rigorous standards for fire protection exhibiting unprecedented high fire protection properties: TEROSON FO 2 FR.



Teroson FO 2 FR

Teroson FO 2 FR is a sealing strip system for the exterior (cold component side), which is used on windows, parapets and other elements as well as on the structure of curtain walls. The film is made of a special technical synthetic with cross-laminated knitted fabric and meets all the properties that are crucial in facade sealing:

- impermeable to water
- open to diffusion
- UV-resistant
- bitumen-resistant
- robust, flexible and elastic

But what truly sets TEROSON 2 FR apart is its B-s2, d0 fire protection classifications (tested to EN 13501-1), making it flame-retardant.



“TEROSON FO 2 FR offers protection against all four elements - water, air, earth and fire – all in one.”

Vito Henning, Head of Curtain Walling
at Henkel Adhesive Technologies



Combination of film and adhesive passes SBI test procedure

The TEROSON FO 2 FR sealing film is applied without any mechanical fixing using the 1-component hybrid adhesive Teroson AD KDS FR. The combination is tested for fire protection properties in accordance with DIN EN 13501 „Fire classification of construction products and types of construction“. The SBI test method (Single Burning Item) is decisive for this. Here, the specimen is positioned in the corner of a closed room on a carrier trolley under a smoke outlet with a measuring tube and exposed to a burner flame for a period of 20 minutes. The testers observe the reaction visually and instrumentally both during and after burning and evaluate it in accordance with the following criteria:

- burning drops or parts falling off
- lateral flame formation (Lateral Flame Spread)
- smoke release rate (Smoke Production Rate)
- energy release rate (Heat Release Rate).

The energy release rate is determined using the oxygen consumption method.

The result: In the test of Teroson FO 2 FR, there was no burning droplets, and smoke production was classified as light to medium. Thus, **the fire protection class B-s2,d0, flame retardant**, was confirmed.



Teroson FO 2 FR therefore meets the high fire protection requirements for exterior walls according to the Muster-Verwaltungsvorschrift Technische Baubestimmungen (MVV TB). Specifically, according to Annex 4, construction products and types of construction accepted as flame retardant must meet a minimum required performance of s2, d0. The system of sealing strip and adhesive even exceeds the B-s3,d0 protection class now required in the United Kingdom for membranes on the outer facade envelope.



“Other facade sealants commonly used on the market only meet class E, normally flammable. We are thus the first supplier to have developed a system certified as flame-retardant - and with weather protection that works, sustainably. In terms of fire protection, our solution is consequently currently the best - and we have the ambition to optimize it even further.”

Alexander Bauer, Technical Manager at TEROSON Bautechnik

Comfortable processing and planning

In addition to its very good technical properties, the Teroson FO 2 FR fire protection sealing film is also convincing in terms of application: it's easy to apply and no relearning or extensive training is required, which reduces the risk of errors to a minimum. Thanks to application with Teroson AD KDS FR, no mechanical fastening is required. The adhesive also bridges gaps of up to 20 mm, can be applied at temperatures as low as -5 °C and allows corrections to be made in the fresh adhesive bond without any problems.

More information
for Teroson FO 2 FR



"With Teroson FO 2 FR, a high level of fire protection can be easily implemented in the sealing of facade connections without generating additional work and associated costs during planning and installation."

Vito Henning, Head of Curtain Walling
at Henkel Adhesive Technologies

Fire protection on the façade does not stop with the choice of insulation material, for example, but also concerns details such as the connections, which are no longer a weak point with the decision to use TEROSON FO 2 FR.

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TEROSON WINTeQ Europe

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

www.terason-bautechnik.com

About TEROSON Bautechnik

TEROSON Bautechnik offers comprehensive product and consulting expertise for waterproofing and adhesive solutions in the areas of facades and windows. As a part of the Düsseldorf-based Henkel Group, the company supplies sealing films and tapes, adhesives, joint sealants, special sealants and other system components to metalworkers and window manufacturers. Customers can rely on more than 25 years of experience in international projects.

