



Sika® Unitherm® Concrete W FIRE PROTECTIVE COATING FOR INTERIOR CONCRETE STRUCTURES

Tested and classified for ceilings and walls R30-R180
as well as columns and beams R30-R120

BUILDING TRUST



HEAT INSULATING INTUMESCENT COATING

Sika® Unitherm® Concrete W

SIMPLE – FAST – SAFE

CONCRETE ITSELF DOES NOT BURN. Still, high temperatures can lead to changes in the material. In this case, concrete loses its insulating function and the reinforcing steel is exposed to critical temperatures. Our thin-film, water-based intumescent coating **Sika® Unitherm® Concrete W** reduces the heat transfer into the steel reinforcement and is particularly suitable for buildings where fire protection retrofitting is necessary due to a change of use or inventory.

YOUR BENEFITS AT A GLANCE:



EASY-TO-USE

Fast, economic and space-saving solution for change of use applying the latest fire protection requirements.

ECOLOGICAL

Low VOC content of < 1 %; emission evaluation for German AgBB and French VOC meets classification A+.

SAFE

Does not increase static load, prevents spalling for up to 120 minutes (in case of C90/105 up to 90 Minuten).

MEASURABLE

Non-destructive determination of the dry film thickness by using an innovative method.

ECONOMICAL

Application directly to the surface without the need of a primer or mesh using lowest material consumption.

WATER-BASED 1-PACK FIRE PROTECTIVE COATING FOR INTERIOR USE

THE FIRE PROTECTIVE COATING Sika® Unitherm® Concrete W can be applied directly to the concrete surface by hand or by airless spraying, without the need of a primer or mesh. In the event of fire it forms a thermally insulating layer. This prevents the concrete structure from spalling and delays the heat transfer into the steel reinforcement.

Colour design with Sika® Unitherm® Top W

Sika® Unitherm® Concrete W not only enhances fire protection requirements but if desired, the water-based 1-pack top coat Sika® Unitherm® Top W enables a decorative, coloured design in all RAL shades. This does not impair the thermally insulating layer underneath.

SYSTEM INFORMATION

- 1 **Sika MonoTop®**
Repair mortar
- 2 **Sika® Unitherm® Concrete W**
Intumescent coating
- 3 **Sika® Unitherm® Top W**
Top coat



FIRE RESISTANCE UP TO 180 MINUTES



Columns and beams

R30 > R60 > R90 > R120 > R180

Ceiling and walls

TESTS

- EN classification according to EN 13501-1 including smouldering fire curve
- The fire resistance of the Sika® Unitherm® Concrete W coating system has been successfully tested for the concrete structures:
 - "walls and ceilings" in accordance with EN 13381- 3:2015 for the following concrete strengths: C 30/37 and C 50/60
 - "columns and beams" in accordance with EN 13381- 3:2015 for the following concrete strengths: C 30/37, C 50/60 and C 90/105
- Non-destructive measurement and exact determination of the dry film thickness of the coating system on the concrete surface
- Tested coatings system including Sika reprofiling mortars and fillers at ambience and fire conditions
- Tested carbonation decelerator (class 1 according to EN 1062-1)



ECOLOGICAL

As an water-based intumescent coating, Sika® Unitherm® Concrete W is ecologically conscious. The organic material content (VOC) is less than one percent. Thereby the coating is suitable for indoor use.

Certificates:

- Emission evaluation by AgBB and French VOC, No. 2011-321 (A+)
- DGNB, highest quality level (4)

COMPATIBLE WITH SIKA REPAIR MORTARS

PRIOR TO THE APPLICATION of the fire protective coating, any damage to the concrete surface must be repaired. Repair mortars from Sika do not impair the function of the intumescent coating. This has been tested and verified in independent fire tests. Therefore, the newly developed Sika® Unitherm® Concrete W is suitable for the renovation or change of use of concrete structures.

TESTED PRODUCTS

Pore and blowhole filler

■ Sika MonoTop®-723 N

Plastic-modified 1-component dry mix cement mortar (PCC)

■ Sikagard®-720 EpoCem®

3-component epoxy resin-enhanced cement-based fine filler

Reprofiling Mortar

■ Sika MonoTop®-422 PCC

1-component, plastic-enhanced and shrinkage-compensated reprofiling mortar with plastic fibres



Note:

Other repair mortars from the Sika MonoTop® series can be used on request.
For information, please contact us at industrial-coatings@de.sika.com.



REFERENCE PROJECTS

DEPARTMENT STORE "THE O" IN MÜHLHEIM AN DER RUHR

In the former "Woolworth House" in the city centre of Mühlheim an der Ruhr, now known as "The O", the fire protection of the concrete ceiling had to be upgraded without loading the statics. The depth of the ceiling did not

comply to the building code and consequently could protect the reinforcing steel to R60. The solution: Sika® Unitherm® Concrete W. Besides the concrete structure, the steel columns of the building were also protected by Sika using Sika® Pyroplast® ST-100.



1. Technical support during application by Sika employees.
2. Measurement of the wet film layer thickness directly after the application.

PROJECT DETAILS

OBJECT

"The O" in Mühlheim/Ruhr

PERIOD

July - August 2019

COATED AREA

approx. 3,000m²

PRODUCTS

- Sika® Unitherm® Concrete W
- Sika® Unitherm® Top W
- Sika® Pyroplast® ST-100

RESTORATION OF AN UNDERGROUND CAR PARK IN ESCHEN

The fire protection of the underground car park at the Unterland school centre in Eschen, Principality of Liechtenstein, has been restored in 2019. The concrete ceiling of the

car park was coated with Sika® Unitherm® Concrete W. Due to the simple processing and the possibility of colour design, the building owners chose the new fire protective coating from Sika.



1. Freshly restored with Sika® Unitherm® Concrete W

PROJECT DETAILS

OBJECT

Underground car park in Eschen

PERIOD

Summer 2019

PRODUCTS

- Sika® Unitherm® Concrete W
- Sika® Unitherm® Top W

VIENNA AIRPORT

The concrete ceiling in Terminal 2 required a fire protection upgrade with a fire resistance class of R90. Because of the convincing properties of Sika® Unitherm® Concrete W, the

parties involved chose the water-based fire protective coating. It was applied to an area of approx. 6,500 m² using an airless spray application method.



1. Sika® Unitherm® Concrete W was used on an area of approx. 6,500 m².
2. It was applied directly to the concrete ceiling using an airless spray application method.

PROJECT DETAILS

OBJECT

Vienna Airport

PERIOD

November 2019 - February 2020

COATED AREA

approx. 6,500 m²

PRODUCTS

- Sika® Unitherm® Concrete W

OUR COMPETENCE

IN THE DEVELOPMENT and production of our intumescent coatings, we focus on qualitative sustainable solutions ensuring the success of our customers and the safety of people, buildings and environment. Every batch of our fire protective coatings is fire-tested before use, that's what our slogan "Building Trust" stands for.

GLOBAL BUT LOCAL PARTNERSHIP

WITH OVER 100 LOCAL SUBSIDIARIES with the aim to make global technology meet local expertise, Sika transfers know-how locally on a global basis to guarantee local support in selection, validation and application of our products on job sites around the world.

WHEN EVERY SECOND COUNTS:

Sika® Unitherm® and Sika® Pyroplast® fire protective coating systems for

Steel



Wood



Concrete



CORROSION PROTECTIVE COATINGS - PROVEN AND INNOVATIVE

In addition to fire protection, we have been a reliable partner for the highest corrosion protection requirements for many decades. With our expertise, our wide range of products and services, we offer high-quality coating systems for the implementation of new construction projects and the repair of existing buildings in the following areas:

- Steel structures
- Hydraulic steel structures
- Traffic construction
- Chemistry and Industry
- Tank protection
- Wind energy

Find out more at:
www.sika.gr

WORLDWIDE SYSTEM SOLUTIONS FOR CONSTRUCTION AND INDUSTRY



CONCRETE



WATERPROOFING



ROOFING



FLOORING



CORROSION AND FIRE PROTECTION



SEALING AND BONDING



REFURBISHMENT



BUILDING FINISHING



INDUSTRY

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



**PROFESSIONAL
FIRE PROTECTION**

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