



FLOORING

Sikafloor® MultiDur

WATER-BASED EPOXY

FLOORING

# SAFETY AGAINST SUBSTRATE MOISTURE: Sikafloor® MultiDur WATER-BASED EPOXY RANGE

**SMART USE OF WATER-BASED MATERIALS** can be an effective strategy against moisture-related problems in floor constructions. This is what we implement in our Sikafloor® MultiDur water-based epoxy range.

## PROBLEM SOLVER AND SAFETY

In flooring works, moisture-related issues can cause unexpected delays, or in the worst case scenario, require repairs and re-coating.

Sikafloor® MultiDur solves problems in the for the following issues:

- Moisture-related blisters in floor coating
- Missing water vapor membrane under the ground floor slabs
- Uncertain moisture conditions of and under the floor slabs
- Uncertain if a concrete floor is dry enough for the coating works

Sikafloor® MultiDur water-based epoxy range is the right solution for your flooring projects. As solvent-free water-based products they are odorless and safe to use. With extremely low emission rates of volatile organic compounds (VOCs) the systems meet the strict regulations for indoor air quality and use.

With the sustainable Sikafloor® MultiDur water-based flooring systems applicators and designers have a solution for typical moisture-related problems and environmental issues. This provides security and protection which ultimately may also save money and a great deal of time.



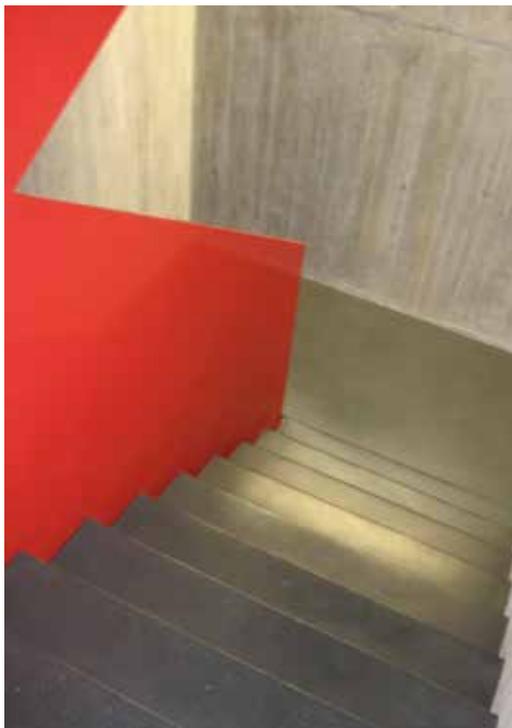
## MAIN USES

- Floor slabs without a damp proof membrane and a risk of rising moisture
- New concrete slabs with high humidity
- Concrete floors with moisture-related issues
- Higher fire rating required

## TYPICAL PROJECT TYPES

- Commercial buildings
- Industrial facilities
- Workshops
- Storages
- Garages
- Escape routes and areas requiring a high fire resistance classification

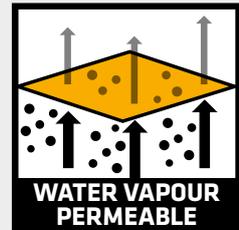




## FEATURES AND BENEFITS

### WATER VAPOR PERMEABLE - "BREATHABLE"

- Can be reliably used on concrete slabs with high moisture content
- Rising moisture after application cannot cause debonding from concrete



#### Benefits:

- Fast application – short waiting time after concrete works
- Can be used safely without moisture barrier

## ODORLESS AND LOW VOC RATING

- Meets the strict indoor emission regulations (AgBB, A+, M1, LEED v4)
- Solvent free
- Safe and comfortable to use



#### Benefits:

- No need to close the facility during application
- Employee friendly
- Credits and suitable for sustainable building schemes

## HIGH FIRE RESISTANCE CLASSIFICATION

- A2fl-s1 fire resistance classification (Sikafloor® MultiDur WS-26)
- Unique in resin flooring



#### Benefits:

- Safety – less risk in the case of fire
- Resin floor can be used in areas which requires A2fl-s1 rating

# WATER VAPOR PERMEABILITY

An important advantage allowing floor to pass pressure

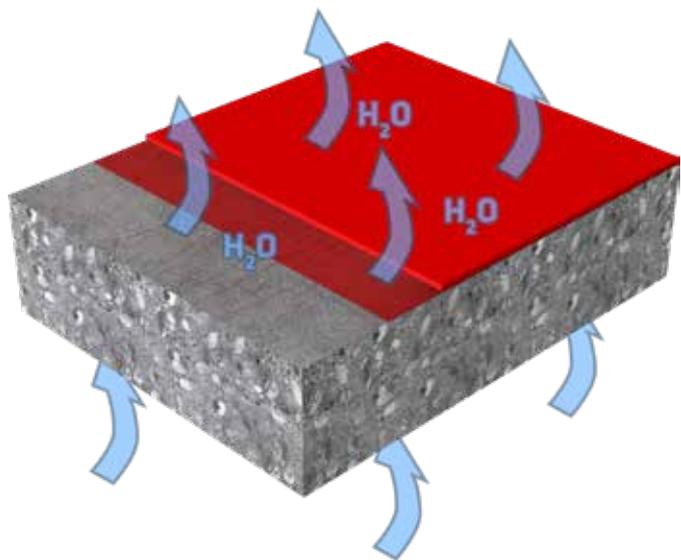
## WATER VAPOR STRIVES FOR EQUILIBRIUM

Moisture-caused adhesion problems with coatings or other impermeable flooring surfaces have a variety of names such as hydrostatic pressure, osmosis, and capillary action.

The problems caused by moisture in and under a concrete slab-on-grade are caused by vapor transmission through the slab. The flow of moisture to the surface is the normal interaction of an area of higher vapor pressure to an area of lower pressure to create equilibrium.

The best way to control moisture-related problems from the ground is to install an effective vapor barrier between the slab and the ground. But what if the vapor barrier is missing, defective or there is another source of water, such as a broken water pipe causing the water vapor pressure?

The same problems can occur if the moisture content in a concrete slab is very high and the surface is closed by an impermeable layer. The guaranteed solution is to use a system that allows the passage of moisture vapor without interacting with the bond. These systems are known as “breathable” systems.



## DEFINING THE VAPOR PERMEABILITY AND RESISTANCE

Vapor permeability is the ability of a material to allow water vapor to pass through it. Here the water is in gaseous form (vapor), which will pass through the material at a rate that is determined by the pore size and thickness of the material.

Vapor resistance is a term used in the construction industry. This is equivalent to the vapor permeability multiplied by the thickness of the material.

### **Water Vapor Resistance Factor ( $\mu$ )**

This is a measure of resistance as a ratio relative to the resistance of still air. The factor  $\mu$  is a relative quantity, and hence is expressed as just a number with no units. This is a property of the bulk material and is not dependent upon size, thickness or shape. The lower the  $\mu$  value, the more permeable the material.

### **Water Permeability – Equivalent Air Thickness (Sd)**

This can only be quoted for a particular thickness of material or system and is measured in meters. The Sd unit is the resistance given in equivalent thickness of air in meters. The lower the number, the better the coat permeability.

The diffusion equivalent air layer thickness specifies how thick a layer of air with the same diffusion resistance would have to be. Note that defining the Sd the whole flooring build-up shall be considered.

Example: Water vapor resistance factor ( $\mu$ ) of the product is 3,500. For a layer of 2 mm, the permeability is  $3,500 \times 0.002 \text{ m} = 7 \text{ m}$  ie. falls to Class II (Acc. EN 1504-2: Class I:  $Sd < 5 \text{ m}$ , Class II:  $5 \text{ m} \leq Sd \leq 50 \text{ m}$ , Class III:  $Sd > 50 \text{ m}$ )

# THE NEW Sikafloor® MultiDur WS-26 – UNIQUE PERFORMANCE

## VAPOR PERMEABILITY

The new Sikas's Sikafloor® MultiDur WS-26 water-based epoxy system has high water vapor permeability. It can be reliably used on concrete slabs with high moisture content and in cases of rising moisture. In spite of open structure it provides a dense and easy to clean surface without application of any further sealer layer.

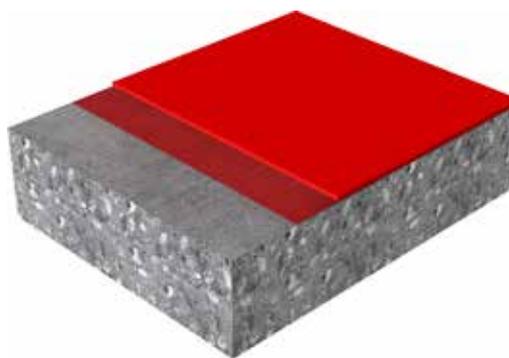
## EMISSONS

The products in the system build-up contain no solvents and are odorless during application. The system meets the strictest European regulatory requirements for indoor flooring finishes including M1, A+ and AgBB. Using the system generates LEED v4 credits.

## FIRE RESISTANCE

Sikafloor® MultiDur WS-26 is a unique resin flooring system **with fire resistance classification A2fl-s1 (acc. EN 13501-1)**. The system provides increased fire safety and is particularly suitable for rooms and areas like escape routes and any spaces requiring higher classification.

## Sikafloor® MultiDur WS-26



- Smooth, colored, silky matt finish
- Water-vapor permeable
- Fire resistance class A2fl-s1

Thickness: 2 – 3 mm

Uses:

Workshops, commercial buildings, industrial facilities, storages, escape routes



# SYSTEMS AND PRODUCT OVERVIEW

**SIKA'S Sikafloor® MultiDur WATER-BASED** epoxy floorings comprise build-ups from thin-rolled high-build coating to trowel-applied and broadcasted multi-layer systems.

## PRODUCT RANGE

### **Sikafloor®-2540 W**

Water-based epoxy roller coat.  
Use: Primer and thin sealer coat

### **Sikafloor®-240 W N**

Water-based self-smoothing epoxy wear coat and base coat.  
Use: Primer and smooth wear coat or base coat





## SYSTEM RANGE

### Sikafloor® MultiDur WS-10



- Smooth, colored, gloss finish
- Water-vapor permeable

Thickness: 0.2 - 0.3 mm

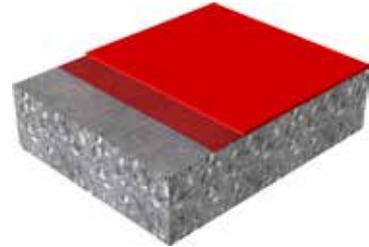
Uses:

Workshops, residential buildings, garages, storages, light to medium industrial areas

Build-up:

- Primer: Sikafloor®-2540 W + 5% H<sub>2</sub>O
- Wear coat: Sikafloor®-2540 W

### Sikafloor® MultiDur WS-26



- Smooth, colored, silky matt finish
- Water-vapor permeable
- Fire resistance class A2fl-s1

Thickness: 2 - 3 mm

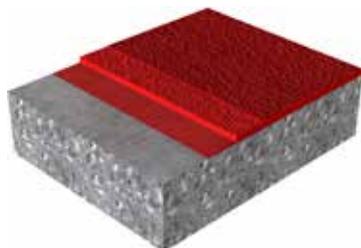
Uses:

Workshops, commercial buildings, industrial facilities, storages, escape routes

Build-up:

- Primer: Sikafloor®-2540 W + 5% H<sub>2</sub>O or Sikafloor®-240 W N + 5% H<sub>2</sub>O
- Wear coat: Sikafloor®-240 W N

### Sikafloor® MultiDur WB-26



- Textured, colored, semi-gloss finish
- Water-vapor permeable

Thickness: 3 - 4 mm

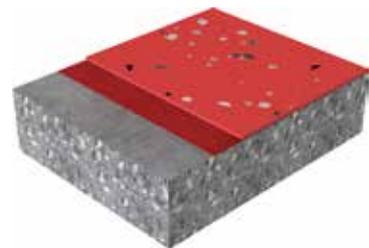
Uses:

Garages, workshops and industrial buildings where improved slip resistance is required

Build-up:

- Primer: Sikafloor®-2540 W + 5% H<sub>2</sub>O or Sikafloor®-240 W N + 5% H<sub>2</sub>O
- Base coat: Sikafloor®-240 W N + QS broadcast
- Sealer: Sikafloor®-2540 W

### Sikafloor® MultiDur WS-27



- Smooth, flaked, colored, silky matt finish
- Water vapor permeable

Thickness: 2 - 3 mm

Uses:

Commercial buildings, storages

Build-up:

- Primer: Sikafloor®-2540 W + 5% H<sub>2</sub>O or Sikafloor®-240 W N + 5% H<sub>2</sub>O
- Wear coat: Sikafloor®-240 W N + Sikafloor® Color Chips
- Sealer: Sikafloor®-304 W

# GLOBAL BUT LOCAL PARTNERSHIP



## FOR MORE INFORMATION:



### WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

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



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