



# **Sikafloor<sup>®</sup> and Sikagard<sup>®</sup>** Flooring and Wall Coating Solutions for Cleanroom Environments Selection Guide



Innovation & since  
Consistency | 1910

# Sika® Flooring and Wall Coating Solutions for Cleanroom Environments



© Fraunhofer IPA\*

In recent years Sika has developed advanced new flooring and wall coating solutions for cleanroom environments. Manufacturing under cleanroom conditions, is increasingly becoming more widespread and demanding, with regards not only to VOC/AMC emissions (Volatile Organic Compounds/Airborne Molecular Contaminants), but also to particle emissions. The number of products which have to be produced and processed under cleanroom conditions is constantly growing, from electronics and automotive to food, pharmaceuticals and cosmetics. In many of these industries, cleanroom manufacturing plus a high degree of component cleanliness are now essential to achieve their desired product quality. **Sikafloor®-CR** and **Sikagard®-CR** ranges are the 'State of the Art' in products specifically developed for floor, wall and ceiling coatings in cleanroom environments.

## Application Related Advantages

- Easy to apply with no restrictions compared to a standard epoxy application
- Flexibility in the system build up to serve individual requirements
- Very low odour

## Individual Design Opportunities

**Sikafloor®** and **Sikagard®** are suitable for:

- All clean manufacturing facilities with a controlled level of contamination, such as minimum particle and VOC/AMC (Volatile Organic Compounds / Airborne Molecular Contaminants) emissions.
- All manufacturing facilities where cleanroom product performance is demanded to ensure high standards of cleanliness, including those for semi-conductors, optical goods, electronics, foodstuffs, pharmaceuticals and in the automotive industry and hospitals.

## Performance Related Advantages

- **Sikafloor®** and **Sikagard®** cleanroom suitable products have been tested to particle emissions, so that the different material pairings can be classified into cleanliness classes in accordance with the international standard ISO 14644-part 1.
- Furthermore, **Sikafloor®** and **Sikagard®** cleanroom suitable products have been specially designed and tested to meet the stringent outgassing requirements for cleanroom environments in accordance with the international standard ISO 14644-part 8.

## Industrial Alliance Cleanroom Suitable Materials – CSM

The Fraunhofer IPA founded the Industrial Alliance CSM and organises the main work topics and coordinates the required research including the recording and analysis of data. The aim of founding the industrial alliance "Cleanroom Suitable Materials" was to form a sound scientific basis for assessing the cleanroom suitability of materials and for determining material selection criteria for clean applications.



## Test Bench "Material Inspec"



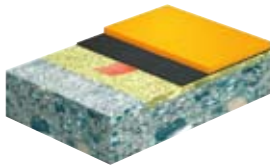
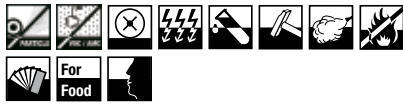


# Conductive Flooring Systems



## Smooth Ultra Low VOC Conductive Screed

### Sikafloor®-269 ECF CR



#### System Build-up:

Primer:

**Sikafloor®-144/-161**

Conductive layer:

**Sikafloor®-220 W Conductive**

Wearing course:

**Sikafloor®-269 ECF CR**

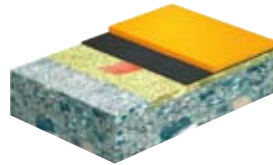
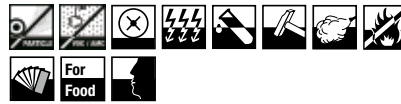
A two part, total solid, electrostatic conductive, ultra low emission, coloured, epoxy binder for self-smoothing screed systems.

Total layer thickness: **ca. 2 mm**



## Smooth Low VOC Conductive Screed

### Sikafloor®-266 ECF CR



#### System Build-up:

Primer:

**Sikafloor®-144/-161**

Conductive layer:

**Sikafloor®-220 W Conductive**

Wearing course:

**Sikafloor®-266 ECF CR**

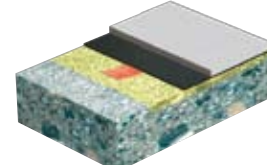
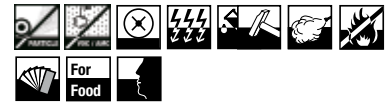
A two part, total solid, electrostatic conductive, low emission, coloured, epoxy binder for self-smoothing screed systems.

Total layer thickness: **ca. 2 mm**



## Smooth ESD Screed

### Sikafloor®-235 ESD



#### System Build-up:

Primer:

**Sikafloor®-144/-161**

Conductive layer:

**Sikafloor®-220 W Conductive**

Wearing course:

**Sikafloor®-235 ESD**

A two part, total solid, ESD, low emission, coloured, epoxy binder for self-smoothing screed systems.

Total layer thickness: **ca. 2 mm**

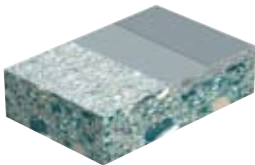
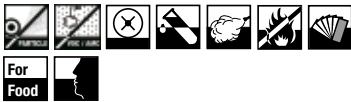


# Floor and Wall Coating Systems



## Coloured Roller Coating System

### Sikagard®-264



#### System Build-up:

Primer:  
**Sikafloor®-144/-161**  
Roller coat:  
1×2 **Sikafloor®-264**

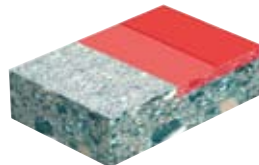
A two part, total solid, coloured, epoxy roller coating.

Total layer thickness: **0.6 – 0.8 mm**



## Roller Coating System

### Sikagard®-183 W CR



#### System Build-up as a Floor Coating:

Primer:  
**Sikagard®-183 W CR + 5% Water**  
Roller coat:  
1×2 **Sikagard®-183 W CR**

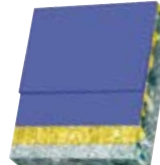
A coloured water dispersed epoxy resin based coating for floors and walls.

Total layer thickness: **0.3 – 0.5 mm**



## Roller Coating System

### Sikagard®-183 W CR



#### System Build-up as a Wall Coating:

Primer/Porefiller:  
**Sikagard®-185 Primer/Porefiller**  
Wall coating:  
1×2 **Sikagard®-183 W CR**

A coloured water dispersed epoxy resin based coating for floors and walls.

Total layer thickness: **0.3 – 0.5 mm**

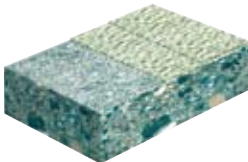


# Textured Floor Coating System



## Textured Low VOC Coating

### Sikafloor®-266 CR Thixo



#### System Build-up:

Primer:

#### Sikafloor®-144/-161

Textured roller coating:







#### Sikafloor®-266 CR+ Extender T

A two part, total solid, low-emission, coloured, epoxy binder for textured coating systems.

Total layer thickness: **0.6 – 0.8 mm**



## Project Related Requirements and the Functions of Flooring Systems

-  Low particle emissions in accordance with the international cleanliness class ISO 14644-part 1.
-  Low VOC/AMC (Volatile Organic Compounds/Airborne Molecular Contaminants) emissions in accordance with the international clean-ness class ISO 14644-part 8.
-  Mechanical resistance is defined by type (transport load, type of tyres, contact area) and frequency of exposure.
-  Chemical resistance according to the **Sikafloor®** Chemical Resistance Chart.
-  Electrical conductivity is used to prevent electrical interference with sensitive equipment or avoid a build-up to static electricity, which could generate sparks and create a risk of fire or explosion.
-  Suitable as a flooring system for the food industry. Please refer to the individual proof statement.
-  Slip resistance is always a question of surface design. The specific environment defines the limits. Various finishes can be achieved. Please refer to the individual test certificate.
-  Impact resistance is related to the specific conditions of each operation. Allowance should be made for high point loads.
-  Permeability to liquids. Provides an impermeable seal protecting the concrete and the ground water from leakage of water and environmental pollutants.
-  Fire-resistant. Please refer to the individual test report.
-  Available in a range of colours
-  Total solids or solvent free systems with neutral odour and low VOC emissions should always be considered where appropriate, such as indoor/internal or closed area applications.



# Packaging and Colour Range



## Packaging

### Product

#### **Sikagard®-183 W CR**

2-part, water-dispersed, epoxy primer and binder.

### Packaging

**18 kg units**

#### **Sikafloor®-269 CR**

2-part, low particle and ultra low VOC/AMC emission, coloured, epoxy resin binder.

**30 kg units**

#### **Sikafloor®-269 ECF CR**

2-part, low particle and ultra low VOC/AMC emission, electrostatically conductive epoxy resin binder.

**30 kg units**

#### **Sikafloor®-266 CR**

2-part, low particle and VOC/AMC emission epoxy resin binder.

**25 kg units**

#### **Sikafloor®-266 ECF CR**

2-part, low particle and VOC/AMC emission, electrostatically conductive epoxy resin binder.

**25 kg units**

#### **Sikafloor®-263 SL**

2-part, total solid, coloured, epoxy binder for self-smoothing screed systems.

**20 kg units**

#### **Sikafloor®-264**

2-part, total solid, coloured, epoxy roller coating.

**30 kg units**

#### **Sikafloor®-235 ESD**

2-part, ESD, low particle and VOC/AMC emission, coloured, epoxy resin binder.

**25 kg units**

## Sikafloor® Cleanroom Suitable Solutions – Colour Range

**Sikafloor®-269 CR, Sikafloor®-269 ECF CR, Sikafloor®-266 CR, Sikafloor®-266 ECF CR, Sikafloor®-263 SL, Sikafloor®-264** and **Sikafloor®-235 ESD** are available in almost unlimited choice of colour shades.

**Sikafloor®-183 W CR** is available in a standard colour shade: ~ RAL 7032, ~ RAL 7035, ~ RAL 7038, ~ RAL 9010

Colour variations may occur due to backfilling with quartz sand. Under direct sun light there may be some discolouration and colour variations; this has no influence on the function and performance of the coating.

Due to the nature of carbon fibres providing the conductivity, it is not possible to achieve exact colour matching. With very bright colours (such as yellow and orange), this effect is increased.

\* Fraunhofer IPA: Institute Photonic Microsystems at Dresden, Germany  
Photos: Rene Gaens, Neustadt / Dresden

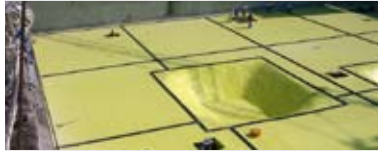
# Sika Full Range Solutions for Construction

## Concrete Production



**Sika® ViscoCrete®**  
**Sika® Retarder®**  
**Sika® SikaAer®**

## Waterproofing



**Sikaplan®, Sikalastic®**  
**Sika® & Tricosal® Waterstops**  
**Sika® Injection Systems**

## Flooring



**Sikafloor®**  
**SikaBond®**

## Corrosion and Fire Protection



**SikaCor®**  
**Sika® Unitherm®**

## Concrete Repair and Protection



**Sika® MonoTop®**  
**Sikagard®**  
**Sikadur®**

## Structural Strengthening



**Sika® CarboDur®**  
**SikaWrap®**  
**Sikadur®**

## Joint Sealing



**Sikaflex®**  
**Sikasil®**

## Grouting



**Sikadur®**  
**SikaGrout®**

## Roofing



**Sarnafil®**  
**Sikaplan®**  
**SikaRoof® MTC®**

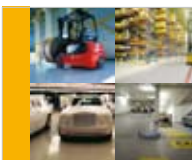
## Also Available from Sika



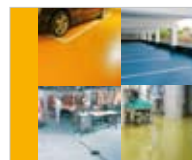
**Sika® Technology and Concepts**  
**for Flooring and Coating**



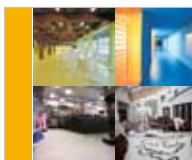
**Sikafloor®-ParGem®**  
**Flooring Solutions for the Food Industry**  
**and other Extreme Service Conditions**  
**Selection Guide**



**Sikafloor®-Economy Line**  
**Modular Epoxy Flooring Solutions**  
**for all Industries and Requirements**  
**Selection Guide**



**Sikafloor®-Pronto Systems**  
**Fast Curing Flooring Solutions**  
**Selection Guide**



**Sika®-ComfortFloor®**  
**Sika Flooring Solutions for**  
**Commercial and Public Building Areas**  
**Selection Guide**

**Sika Services AG**  
 Business Unit Contractors  
 Speckstrasse 22  
 CH-8330 Pfäffikon  
 Switzerland  
 Phone +41 58 436 23 80  
 Fax +41 58 436 23 77  
 www.sika.com

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

