



SIKA® INNOVATIVE SOLUTIONS FLOORING

BUILDING TRUST



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 construction and motor vehicle industries.

100 YEARS OF BUILDING TRUST

Our reputation for quality and reliability is virtually unmatched, and is illustrated through a comprehensive portfolio of problem solving products that have been employed for many years in a diverse range of applications.

COURAGE FOR INNOVATION

Sika's success is based on our long lasting tradition of innovation. We provide intelligent solutions using the most advanced technologies, service and unique expertise. All Sika solutions are designed with our customers' success in mind and we look to build long-lasting and mutually beneficial relationships.

SIKA PRODUCTS

Sika has core competencies in seven (7) different markets: Concrete, Refurbishment, Sealing and Bonding, Waterproofing, Flooring, Roofing and Industry, in both the construction and motor vehicle industries.



SIKA AT A GLANCE

17,000	TEAM MEMBERS
90+	COUNTRIES
160+	FACTORIES WORLDWIDE
8	NEW FACTORIES IN 2014
70	NEW PATENTS IN 2014
3	ACQUISITIONS IN 2014
CHF 5.57 BN	NET SALES IN 2014



SIKA PHILIPPINES: YOUR LOCAL TRUSTED PARTNER

Sika Philippines, Inc. is a proud member of the worldwide Sika Group, which is wholly owned by Sika AG, Switzerland. We have been serving the Philippine market since March 1994.

BENEFIT OF SIKA FLOORING SOLUTION

Sika has continued to strengthen its position as the worldwide market leader in construction chemicals during the last few years. As part of this expansion, Sika has maintained a strong focus on providing flooring and coating systems for many different applications and extending them worldwide. Today Sika provides a full range of flooring and coating solutions, which meet or exceed all of the latest standards and requirements for both new and refurbishment works.

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Sikafloor® SOLUTIONS FOR STORAGE, LOGISTICS and SALES AREAS

LARGE QUANTITIES OF GOODS have to be produced, distributed and delivered quickly and on time for an efficient economy to function. In the manufacturing industries where these goods are handled and stored, the warehouses, their loading bays etc., all need to have their floors designed and installed to suit the specific conditions of each area's operation.

It is always essential to ensure that the stresses imposed are all able to be safely accommodated by the flooring system. Therefore, fully understanding each area's operations and then defining all of the performance requirements for the floor is most important. This includes the required mechanical impact, abrasion and chemical resistance, thermal exposure plus ease of cleaning, and dust prevention, etc.

NEW BUILDINGS

Sikafloor® -3 QuartzTop P is applied as dry powders directly onto the surface of the freshly laid concrete, where they are power float finished, and then harden monolithically with the base concrete. This creates an integrated and extremely hardwearing floor. Concrete curing agents, plus surface hardening and sealing compounds complete the Sikafloor® range.

Additionally, Sika® EpoCem technology can be used on relatively new "green" or existing damp concrete, where it acts as a temporary moisture barrier to reduce waiting time for the application of vapour-tight floor systems.



REFURBISHMENT

Cementitious, self-smoothing Sikafloor® - 81 EpoCem is used to provide a uniform and level surface for the applications of floor finishes.

These vapour permeable and rapid drying screeds provide very economic solutions. Sika® EpoCem Technology is again frequently used in refurbishment projects when the existing floors have rising or high moisture contents but need to be over-coated quickly.

RACKING AREAS

Sikafloor® solutions provide a bright colored floor that can be installed in a wide range of thickness and with a variety of surface textures. These floors are seamless, non-porous and non-dusting, with good chemical resistance. Their properties make the floor hygienic and easy to clean as well as being hard and very durable, so they are ideally suited for use in dry process and racked storage areas.

Sikafloor® solutions CAN PROVIDE DURABLE FLOORING SOLUTIONS FOR COLD STORAGE AREAS EVEN IN THE MOST SEVERE CONDITIONS WITH EXTREME MECHANICAL, CHEMICAL AND THERMAL EXPOSURE.

COLD STORAGE AREAS

Sikafloor® solutions can provide durable flooring solutions for cold storage areas even in the most severe conditions with extreme mechanical, chemical and thermal exposure.



STORAGE, LOGISTICS AND SALES AREAS



REQUIREMENTS

Self-Smoothing Temporary
Moisture Barrier on "Green" or
Damp Concrete



- Self-Smoothing for concrete floors with a damaged or missing water proof membrane
- Reduced waiting time to overcoat green concrete
- No blistering in vapour tight floor toppings when coating damp concrete

SIKA SYSTEM/ PERFORMANCE

Primer: SikaRepair Module
Screed: Sikafloor® -81
EpoCem at layer thickness:
2 - 3 mm or Sikafloor® -82
EpoCem at layer thickness:
4 -7 mm
3-component epoxy modified,
cement based, self-smoothing
screeds.
Topping: Sikafloor® resin system
to suit



REQUIREMENTS

Monolithic Finish for Concrete
Floors



- Economic surface hardening
- Good abrasion resistance
- Good impact resistance
- Color options

SIKA SYSTEM/ PERFORMANCE

Dry-shake: Sikafloor® - 3
QuartzTop applied on the fresh
concrete and power float finished



REQUIREMENTS

Surface Hardener for Concrete
Floors



- Economic surface hardening
- Good abrasion resistance
- Prevent surface dusting

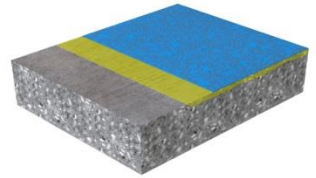
SIKA SYSTEM/ PERFORMANCE

Surface hardener: 1 - 2x Sikafloor®
CureHard-24 sodium silicate
based, or Sikafloor® CureHard
LI, lithium silicate based, liquid
hardeners, spray applied and
brushed into freshly finished
hardened, or ground existing
concrete



REQUIREMENTS

Textured, Colored Rigid Coating



- Good wear and abrasion resistance
- Good chemical resistance
- Slip resistant
- Easy cleaning
- Colored

SIKA SYSTEM/ PERFORMANCE

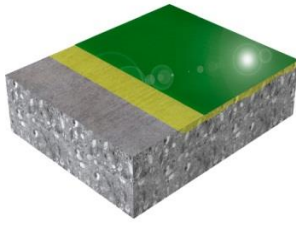
Primer: Sikafloor®-161
Coating: Sikafloor®-264 Thixo,
2-part, total solid, colored, epoxy
resin binder for textured coatings
Total system thickness:
0,6 - 0.8mm





REQUIREMENTS

Smooth, Colored Rigid Screed



- High wear and abrasion resistance
- Good impact resistance
- Good chemical resistance
- Medium thermal resistance
- Easy to clean
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161

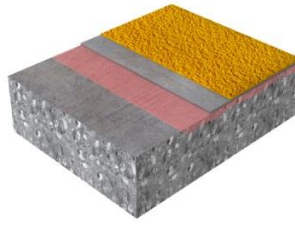
Top coat: Sikafloor®-263 SL, 2-part, colored epoxy resin binder for self-smoothing screed systems

Total system thickness:
2 - 3 mm



REQUIREMENTS

Cold Storage (> -10°C), Broadcast, Colored ECC Screed



- Medium wear resistance
- Medium thermal shock resistance
- Slip resistant
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: SikaRepair Module

Base layer: Sikafloor®-81 EpoCem broadcast with quartz sand

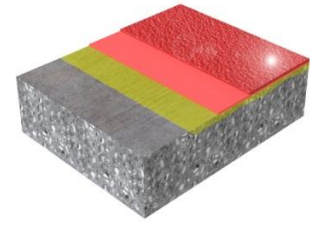
Seal coat: Sikafloor® -264, 2-part, total solid, colored, epoxy resin coating

Total system thickness:
2 - 4 mm



REQUIREMENTS

Cold Storage (> -10°C), Broadcast, Colored Rigid Screed



- High wear resistance
- Good chemical resistance
- Medium thermal shock resistance
- Slip resistant
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -155 WN

Base layer: Sikafloor®-21 PurCem

Total system thickness:
2 - 4 mm



Sikafloor® SOLUTIONS FOR PRODUCTION AND PROCESSING AREAS

THE BIGGEST CHALLENGES FOR flooring systems in manufacturing facilities are generally in the production areas. These floors not only have to withstand severe exposure, including mechanical, chemical and thermal stresses, but also need to provide the right degree of slip resistance to meet health and safety requirements

The Sikafloor® systems applied in production areas are based predominantly on Cement, Epoxy and Polyurethane resin technologies, which are developed in our laboratories from more than 40 years of practical experience. For special requirements, different binder and filler systems are combined to achieve specific properties, e.g. Polyurethane and Cement in the Sikafloor® PurCem range for high temperature and chemical resistance in wet environments.

DRY AND WET AREAS

Most production areas can be divided into 'dry' or 'wet' processing areas. Flooring systems in 'wet' process areas

generally require a higher degree of slip-resistance, which must also be easily cleaned, and yet be resistant to the water and any chemical exposure. In the production areas of the food and beverage industries in particular, a clean floor is obviously of crucial importance to facilitate the necessary hygienic working environment.

'Dry' processing areas also often require a balance or compromise to be made between ease of cleaning and slip resistance to meet the requirements for efficiency and hygiene, plus health and safety.



**AREAS WITH EXTREME EXPOSURE
(COMBINATIONS OF WET CONDITIONS, CHEMICALS,
TEMPERATURES AND ABRASION)**

Sika has a complete range of flooring solutions for industrial facilities that are required to be durable under extreme exposures and conditions of use. These conditions can vary from severe chemical attack with thermal shock exposure in the food industry, to high point loading and abrasion in the automotive industry.

The Sikafloor® PurCem range will perform under the most demanding service environments and can meet all of these and many other different individual exposure requirements with design flexibility. This includes a full range of non-slip / anti-skid profiles.

MINIMUM DOWNTIME FOR PRODUCTION

Each day or even each hour of downtime in production can be very expensive in both new construction and in refurbishment projects. It is always therefore essential to finish all of the flooring work within the shortest possible

**USING THE FAST CURING
Sikafloor® Curehard - 24
FOR FLOOR MAINTENANCE
AND REFURBISHMENTS
PROJECTS CAN REDUCE DOWNTIME
TO A MINIMUM.**

time, but still ensuring the required performance and durability. Using the fast curing Sikafloor® Curehard - 24 for floor maintenance and refurbishment projects can reduce downtime to a minimum. Sikafloor® systems can also be designed to withstand all of the other requirements and conditions with various degrees of slip resistance and surfaces that are easy to clean



PRODUCTION AND PROCESSING AREAS

Dry Areas



REQUIREMENTS

Colored Roller Coating



- Good wear and abrasion resistance
- Good chemical resistance
- Easy to clean
- Colored

SIKA SYSTEM/ PERFORMANCE

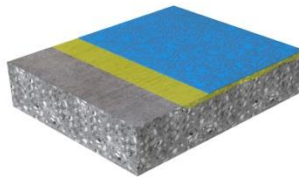
Coating: 2 x Sikafloor® -264, 2-part, total solid, economic, colored, high build coating based on an epoxy resin binder

Total system thickness:
0.6 - 0.8mm



REQUIREMENTS

Textured, Colored Rigid Coating



- Good wear and abrasion resistance
- Good chemical resistance
- Slip resistance
- Easy to clean
- Colored

SIKA SYSTEM/ PERFORMANCE

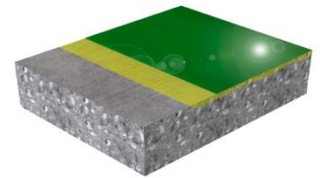
Primer: Sikafloor® -161
Coating: Sikafloor®-264 Thixo, 2-part, total solid, colored, epoxy resin binder for textured coating systems

Total system thickness:
0.6 - 0.8 mm



REQUIREMENTS

Smooth, Colored Rigid Screed



- High wear and abrasion resistance
- Good impact resistance
- Good chemical resistance
- Medium thermal resistance
- Easy to clean
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161
Screed: Sikafloor®-263 SL, 2-part, total solid, colored, epoxy resin binder for producing self-smoothing screed systems

Total system thickness:
2 - 3 mm



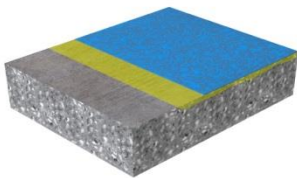
PRODUCTION AND PROCESSING AREAS

Wet Areas



REQUIREMENTS

Textured, Colored Rigid Coating



- Good wear and abrasion resistance
- Good chemical resistance
- Slip Resistance
- Easy to clean
- Colored

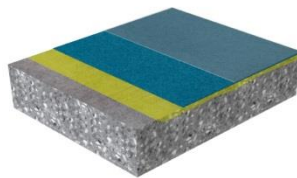
SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161
 Coating: Sikafloor® -264, Thixo, 2-part, total solid, colored, epoxy resin binder for textured coating systems
 Total system thickness:
 0.5 - 0.8 mm



REQUIREMENTS

Broadcast, Decorative Screed



- High wear resistance
- Medium thermal shock resistance
- Slip resistant
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161
 Base layer: Sikafloor® -263 SL, 2-part, total solid, colored, epoxy resin binder for self-smoothing screed systems
 Broadcast layer: colored quartz sand
 Total system thickness:
 1.5 - 3 mm



REQUIREMENTS

Broadcast, Colored, Rigid Screed



- High wear resistance
- Good chemical resistance
- Medium thermal shock resistance
- Slip resistant
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161
 Base layer: Sikafloor®-263 SL, 2-part, total solid, colored, epoxy resin binder for self-smoothing screed systems
 Broadcast: Quartz sand
 Seal coat: Sikafloor®-264, 2-part, total solid, colored, epoxy resin coating
 Total system thickness:
 2 - 4 mm



PRODUCTION AND PROCESSING AREAS

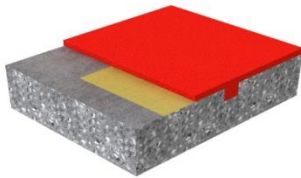
Extreme Exposure

(Combinations of Wet Conditions, Chemicals, Temperatures and Abrasion)



REQUIREMENTS

Heavy Duty, Resistant Screed



- High wear resistance
- High chemical resistance
- High thermal shock resistance
- Slip Resistance
- Odor-free
- Hygienic
- Colored
- Easy to clean (incl. steam cleaning)

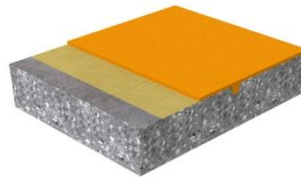
SIKA SYSTEM/ PERFORMANCE

Primer: Generally not required.
If necessary use Sikafloor® -161
broadcast with quartz sand
Screed: Sikafloor®-20 PurCem
3/4-part, easy trowel,
polyurethane modified, cement
based floor screed
Total system thickness:
6 - 9 mm



REQUIREMENTS

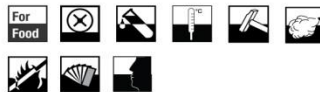
Medium Duty, Resistant Screed



- High wear resistance
- High chemical resistance
- Medium thermal shock resistance
- Slip resistant
- Odor-free
- Hygienic
- Easy to clean
- Colored

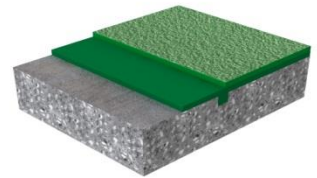
SIKA SYSTEM/ PERFORMANCE

Primer: Scratch coat of
Sikafloor®-21 PurCem or
Sikafloor®-161
Screed: Sikafloor®-21 PurCem,
3 / 4-part, self-smoothing,
polyurethane modified, cement
based screed
Total system thickness:
4.5 - 6 mm



REQUIREMENTS

Broadcast, Medium to Heavy Duty,
Resistant Screed



- High wear resistance
- High chemical resistance
- Enhanced slip resistance
- Medium thermal shock resistance
- Hygienic
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -155 W
Base layer: SikaFloor® -21 PurCem,
Self-smoothing Polyurethane
Total system thickness:
4.5 - 6 mm



Sikafloor[®], Sikaflex[®] and Sikagard SOLUTIONS FOR CLEANROOM AREAS

IN RECENT YEARS SIKA has developed a new generation of advanced flooring, wall coating and joint sealant solutions for cleanroom environments. Manufacturing under cleanroom conditions, is becoming increasingly more widespread and demanding, with particular regard to VOC / AMC emissions (Volatile Organic Compounds / Airborne Molecular Contaminants), particle emissions and biological contamination.

The number of products which have to be produced and processed under cleanroom conditions is constantly growing, from electronics and automotive components 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.

Many Sikafloor[®], Sikagard and Sikaflex[®] system are the 'State of the Art' in cleanroom solutions, specifically developed and certified for cleanroom environments ranging from those in the Semi-conductor and Electronics industries to those in the Life Science industries. Therefore we are the ideal partner to help you select the best solutions for your individual processes and cleanroom requirements and which the unique CSM product qualification.

CERTIFICATION

Most of the Sikafloor[®], Sikagard and Sikaflex[®] systems in this brochure are tested and certified for their use in a cleanroom environment.

Furthermore, in depth test reports and proof statements are available for each certified product or system, which contain all of the relevant information regarding the testing parameters and standards. Please ask your local Sika representative for specific details and you can also refer to the public database of the Fraunhofer IPA Institute where all of the tested and certified Sika solutions are listed: www.tested-device.com



CLEANROOM SUITABLE MATERIALS CSM

CSM - Cleanroom Suitable Materials are the world's first standardized product qualifications according to the ISO 14644 and GMP standards for all cleanroom and life science markets.

The Fraunhofer IPA founded the Industrial Alliance CSM and organizes their main work topics and coordinates the required research, including the recording and analysis of all relevant 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 the material selection criteria for cleanroom applications. Sika was a founding member of this alliance and plays an active role in the development of these standards and regulations.

Sikafloor[®], Sikaflex[®] and Sikagard SOLUTIONS FOR CLEANROOM AREAS

CSM - CERTIFIED CLEANROOM SUITABLE MATERIALS FOR SPECIFIC INDUSTRIES

LIFE SCIENCE INDUSTRIES

The following industries are particularly aware of particle emissions and biological resistance according to the global GMP standard.

- Food
- Biotechnology
- Medical devices
- Pharmaceuticals



3. * Chemical resistance depends very much on the process and the regime which needs to be checked individually. Please refer to the Sikafloor Chemical Resistance Chart available from your local Sika Organization.

Requirements

1. Low particle emissions
2. Biological resistance
3. Chemical resistance*
4. Conductivity

Sika Solutions:

One label contains all the information for clients or specifiers working in the cleanroom industries!



ELECTRONICS AND RELATED INDUSTRIES

The following industries are particularly aware of particle and TVOC emissions according to the global ISO14644 standard.

- Solar panels
- Hard discs
- Flat panel screens
- Semiconductors
- Optical equipment
- Microsystems
- Automotive
- Aerospace



3. * Chemical resistance depends very much on the process and the cleaning regime, which needs to be checked individually. Please refer to the Sikafloor Chemical Resistance Chart available from your local Sika Organization.

Requirements

1. Low particle emissions
2. Low VOC emissions
3. Chemical resistance*
4. Conductivity

Sika Solutions:

One label contains all the information for clients or specifiers working in the cleanroom industries!



Sikafloor® SOLUTIONS FOR ESD PROTECTION AND ELECTRO STATIC DISCHARGE CONTROL

IN INDUSTRIES WHERE ELECTRONIC components or volatile chemicals are involved, static electricity can result in significant damage, injury and financial loss. All active electronic components and equipment e.g. micro-chips, integrated circuits and machinery are sensitive to electrostatic discharges (also known as ESD events).

Even when areas and people are equipped to handle such static-sensitive devices, inadvertent contact and damage can occur. Sikafloor® ESD (Electro Static Discharge), DIF (Dissipative Flooring) and ECF (Electrically Conductive Flooring) Systems, can safeguard your entire process. These systems can be de-signed to produce a floor tailored to meet your specific needs.



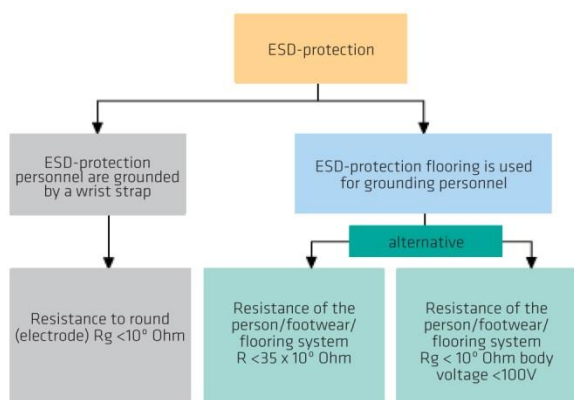
SPECIFICATION

None of the specific conductivity or electrical resistance values mentioned in any of the International or National Standards in the table shown are mandatory.

The values can be adapted to meet local requirements by the responsible authorities. Before applying an ESD or dissipative/conductive flooring system, Sika always recommends a detailed assessment of at least the following parameters, then the most appropriate values can be determined and agreed by all of the parties involved:

- Limits for the electrical resistance and body voltage generation
- Methods and conditions of measurement
- Equipment to make these measurements
- Any applicable Standards or specifications

RESISTANCE RANGES ACCORDING TO IEC 61340-5-1 OR ANSI/ESD S 20.20



WHAT IS AN ESD EVENT AND WHAT DOES IT DO?

An ESD event is an Electrostatic Discharge. This is basically a spark (a micro lightning-bolt in effect), which passes from one charged conductive surface to another. This incredibly rapid transfer of what had previously been a static (non-moving) charge can cause fires or explosions, create heat, light and even sounds. It is this potentially unseen, unfelt or unheard 'micro lightning' spark that can occur without warning, which must be prevented or controlled.

STANDARDS USED IN ASIA:

Systems:	SJ/T 11294-2003 (ECF) Resistance to Ground $R_c > 5 \times 10^4 - < 1 \times 10^6 \Omega$	SJ/T 11294-2003 (DIF) Resistance to Ground $R_c > 1 \times 10^4 - < 1 \times 10^9 \Omega$	IEC 61340-5-1 (IEC 61340-4-5) System Test: <math>< 35 \text{ M } \Omega</math>	IEC 61340-5-1 (IEC 61340-4-5) Walking Test (BVG) <math>< 100 \text{ Volt}</math>	IEC 61340-5-1 (IEC 61340-4-1) Resistance to Ground $R_c < 10^9 \Omega$
Smooth, hygienic floors					
Sikafloor®-262 AS N	▲	-	-	-	▲
Sikafloor®-239 EDF	-	▲	-	▲	
ESD system with very low body voltage generation					
Sikafloor®-235 ESD	-	-	▲	▲	▲

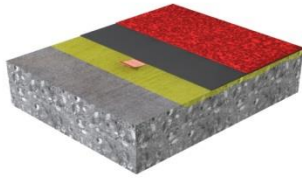
▲ Meets the Standard - Does not meet the Standard

ESD PROTECTION AND ELECTROSTATIC DISCHARGE CONTROL



REQUIREMENTS

Textured Conductive Coating



- Good wear and abrasion resistance
- Good chemical resistance
- Slip Resistant

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor®-161

Conductive layer: Sikafloor®-220 W Conductive

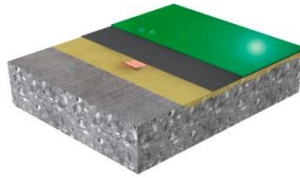
Top coat: Sikafloor®-262 AS N Thixo, 2-part, total solid, electrostatically conductive, colored, epoxy resin based binder for textured coating systems

Total system thickness:
0.6 - 0.8 mm



REQUIREMENTS

Smooth, Conductive Screed



- High wear and abrasion resistance
- Good chemical resistance
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor®-161

Conductive layer:

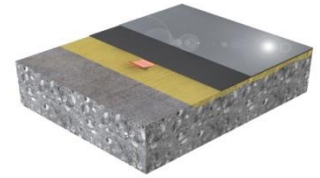
Sikafloor®-220 W Conductive
Top coat: Sikafloor®-262 AS N, 2-part, total solid, electrostatically conductive, colored, epoxy resin based binder for self-smoothing screed systems.

Total system thickness:
~2 mm



REQUIREMENTS

Smooth, ESD Floor Screed



- High wear and abrasion resistance
- Good chemical resistance
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® 161

Conductive layer: Sikafloor®-220 W Conductive

Top coat: Sikafloor®-235 ESD, 2-part, total solid, ESD, low emissions, colored, epoxy resin based binder for self-smoothing screed systems.

Total system thickness
~ 2 mm



Sikafloor® SOLUTIONS FOR MULTI-STOREY AND UNDERGROUND CAR PARKS

PARKING STRUCTURES TODAY

Parking has become a vital part of today's mobile community, especially in metropolitan areas including airports, all of which are growing at an ever faster rate. This means continually providing more parking spaces by building new car parks and frequently extending and refurbishing existing ones.

WHERE DO YOU LIKE TO PARK?

Successful parking structures are designed to meet the user's demands, which include feeling safe and welcome, plus knowing that their cars are in a secure environment. Given the choice, people always park in a brightly lit car park, where they feel their property is best looked after and safe.

INVESTIGATION AND SURVEY OF EXISTING PARKING STRUCTURES

Multi-storey and underground car parks are both subject to many different stresses. In order to discover the root causes of distress and deterioration, it is therefore essential to carry out a professional Condition Survey and assessment. It is obviously important to balance the cost of the investigative work with the benefits that the information derived will provide; but an appropriate survey and assessment is often key to successfully maintaining and extending the service life of an existing parking structure.

**THE ADEQUATE PROTECTION OF
NEW BUILD CAR PARKS WILL
PREVENT COST INTENSIVE
REFURBISHMENT BEING
REQUIRED IN THE FUTURE.**

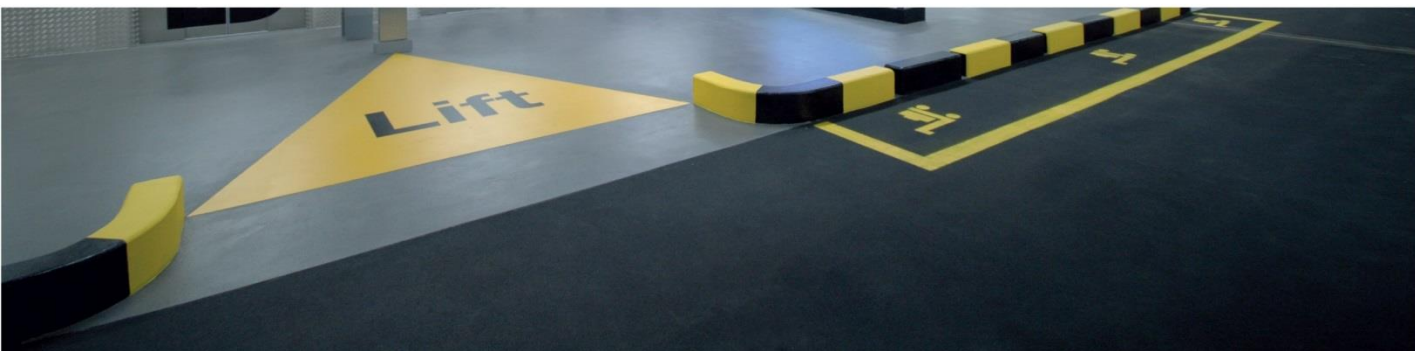
NEW BUILD

Modern parking structures are essential and integrated into a cities' architecture. They are frequently built using 'fast-track' construction techniques, with as much off-site construction as possible, to reduce the disruption in these areas.

Therefore precast and prefabricated sections of steel frames with reinforced concrete decks and stairways are usually combined in composite structures for new car parks. The adequate protection of new build car parks will prevent cost intensive refurbishment being required in the future.

REFURBISHMENT

Most of existing multi-storey car parks are predominantly of reinforced concrete construction, many of which have a history of early deterioration, structural defects and shortcomings in safety. This is due to poor design, poor construction, low standards of maintenance and repair, or a combination of all three. Their exposure is more similar to that of bridges than the building codes they were designed to, and as a result they have deteriorated quickly, particularly due to reinforcement corrosion following the ingress of water and de-icing salts. The closure of many areas and even whole car parks for costly repair or replacement has been necessary. These bad experiences have served to emphasize the need for improved performance in car park design, construction and the materials used, in order to ensure the increased durability and safety of both new and existing structures.



MULTI-STOREY AND UNDERGROUND CAR PARK

Systems for Ground Bearing Slabs



REQUIREMENTS

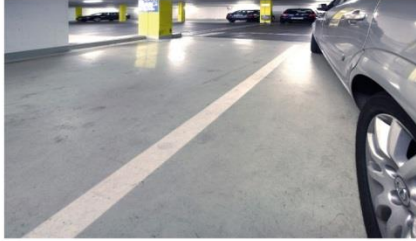
Harderened Concrete Floor Finish



- Economic solution
- Good abrasion resistance
- Good impact resistance
- Vapor permeable
- Colored

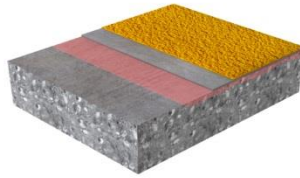
SIKA SYSTEM/ PERFORMANCE

Dry shake: Sikafloor®-3 QuartzTop applied on the fresh concrete and power float finished Curing and Sealing: Sikafloor® Curehard - 24



REQUIREMENTS

Broadcast ECC Screed



- Medium wear resistance
- Medium thermal shock resistance
- Slip resistant
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: SikaRepair Module
ECC Screed: Sikafloor®-81 EpoCem
Broadcast: Quartz sand
Seal coat: Sikafloor®-264, 2-part, total solid, colored, ECC-binder for levelling and broadcast systems for groud floor slabs with high moisture content
Total system thickness:
2 - 3 mm



REQUIREMENTS

Broadcast, Colored Rigid Screed



- Waterproof
- Abrasion resistant
- Impact resistant

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor®-161
Base layer: Sikafloor®-263 SL
Broadcast: Quartz sand
Seal coat: Sikafloor®-264, 2-part, total solid, colored, protective waterproofing and wearing surface
Total system thickness:
2 - 4 mm



MULTI-STOREY AND UNDERGROUND CAR PARK

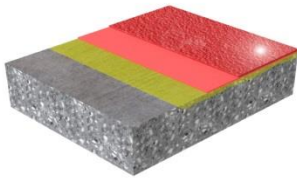
Systems for Intermediate Decks and Ramps



Intermediate Decks

REQUIREMENTS

Broadcast, Colored Rigid Screed



- Waterproof
- Abrasion resistant
- Impact resistant

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161

Base layer: Sikafloor®-263 SL

Broadcast: Quartz sand

Seal coat: Sikafloor®-264, 2-part, total solid, colored, protective water proofing and wearing surface

Total system thickness:
2 - 4 mm



Ramps

REQUIREMENTS

Broadcast Colored Rigid Screed



- Waterproof
- Abrasion resistant
- Impact resistant

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor®-161

Base layer: Sikafloor®-263 SL

Broadcast: Quartz sand

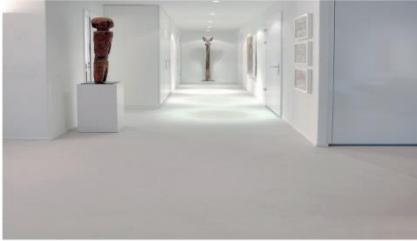
Seal coat: Sikafloor®-264, 2-part, total solid, colored, protective water proofing and wearing surface

Total system thickness:
2 - 4 mm



MULTI-STOREY AND UNDERGROUND CAR PARK

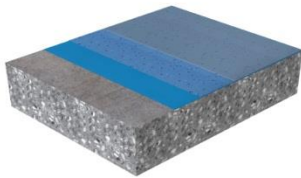
Systems for Decorative Flooring



Decorative Flooring

REQUIREMENTS

Decorative Roller Coating



- Water resistance
- Easy to clean
- Decorative

SIKA SYSTEM/ PERFORMANCE

Base coat: 2 x Sikafloor®-264, 2-part, colored, high build epoxy resin based coating, sprinkled with Colored flakes.

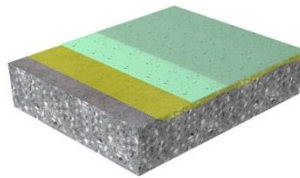
Total system thickness:
0.6 - 0.8 mm



Decorative Flooring

REQUIREMENTS

Smooth Decorative Screed



- Good wear resistance
- Easy to clean
- Decorative

SIKA SYSTEM/ PERFORMANCE

Primer: Sikafloor® -161
Base layer: Sikafloor®-263 SL, 2-part, total solid, colored, epoxy resin binder for self-smoothing screed systems, sprinkled with colored flakes

Total system thickness:
1 - 2 mm



Sikagard SOLUTIONS FOR WALLS AND CEILINGS

FOR A GREAT MANY DIFFERENT exposure and performance requirements in industrial and commercial facilities, the application of a protective wall coating is frequently necessary. The specific demands on the wall can obviously vary according to the specific industry and the function of the area and the processes that are carried on inside it.

The electronic and optical industries need to have Cleanroom conditions on the wall surfaces, with minimal VOC's/ AMC's or particle emissions. Plus they must be easy to clean and ensure the area remains dust free. For this increasingly demanding market Sikagard Wallcoat N, a waterborne epoxy coating, already has all of the necessary certification and approvals. Sikagard Wallcoat N is also the ideal solution for food and beverage plants in the areas where food stuffs are produced, these usually have a cleaning regime using high pressure water-jetting with strong detergents and cleaning agents. Sikagard Wallcoat N perfectly combines good chemical resistance, mechanical resistance and the required ease of cleaning.

Breweries and other drink production areas, together with many other food production and processing facilities have areas where the humidity is constantly very high. The walls in these areas require wall coatings with anti-fungal and anti-bacterial protection. The Sikagard Hygienic Coatings range has the ideal characteristics and performance properties for these important areas. Plus they are also easy to apply by brush, roller or airless spray and adhere to most common wall building substrates. Sikagard Hygienic Coatings are resistant to moisture and elastomeric so they are able to accommodate thermal or structural movement without cracking or flaking. These coatings have been fully tested in accordance with many European standards including EN 13501 (Behaviour in Fire). ISO 846 (biological resistance), EN 18033 (Wet scrub resistance and opacity)



Sikagard SOLUTIONS FOR WALLS AND CEILINGS



REQUIREMENTS

Low VOC / AMC Emissions Wall Coating



- Low particle emissions
- Medium wear resistance
- Medium chemical resistance
- Easy cleaning
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sikagard Wallcoat N ~ 10% thinned with water
 Top coat: Sikagard Wallcoat N, 2-part, water dispersed, epoxy resin based wall coating
 Total system thickness: 0.25 mm



REQUIREMENTS

Lightly Textured, High Build Acrylic Dispersion Coating



- Permeable to water vapour
- Easy to apply
- Anti-fungal and anti-bacterial protection
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sika® Bonding Primer
 Intermediate coat: Sikagard -203 W
 Top coat: Sikagard -203 W, 1-part, acrylic dispersion based coating for walls and ceilings in areas with constantly high humidity
 Total system thickness: 0.60 mm



REQUIREMENTS

Elastomeric, Impact Resistant, Acrylic Dispersion Coating



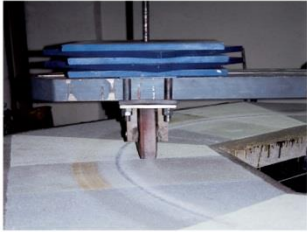
- Permeable to water vapour
- Glass fabric reinforced coating
- High impact resistance
- Anti-fungal and anti-bacterial
- Colored

SIKA SYSTEM/ PERFORMANCE

Primer: Sika® Bonding Primer
 Base coat: Sikagard -203 W + embedment of Sika® Reemat Standard glass fiber fabric.
 Intermediate layer: Sikagard -203 W
 Top coat: Sikagard -205 W, 1-part, acrylic dispersion based coating for walls and ceilings in hospitals, healthcare facilities, food & beverage plants, etc., providing a mid-sheen finish
 Total system thickness: 0.80 mm



PROJECT RELATED PERFORMANCE REQUIREMENTS



TRAFFIC AND MECHANICAL WEAR



Heavy and frequent traffic increases the physical requirements

for mechanical resistance measured as abrasion. Often the greatest wear or exposure occurs in localized areas. Trucking aisles or sections around specialized plant for example, may require different or additional treatment to the surrounding general floor



CHEMICAL RESISTANCE



Resistance to chemical attack is a major factor for many floor finishes.

Assess the effects on the floor of the individual chemicals present plus their combined or mixed effects and the consequences of any chemical reaction. Higher temperatures usually increase the aggressive nature of chemicals.



SERVICE TEMPERATURE



Thermal shock resistance can be a major requirement for floors. It

is important to consider not only the temperature of operating machinery and the products in the processes, but also the temperature of adjacent areas. At either end of the scale, the temperature extremes from hot water or steam used for cleaning and cold from blast freezers for example can create extremely demanding environments; fortunately many Sikafloor® systems can durably accommodate these.



SLIP RESISTANCE



Floor areas may require different degrees of slip resistance, dependent

on their environment, i.e. 'wet' or 'dry' processing areas. This is principally a question of reconciling the floor's surface profile and finish, with the demands for ease of cleaning and the type and likelihood of spillages. Generally speaking the greater the profile, the greater the slip resistance.



HYGIENE



Today's floors have to fulfill the highest hygiene demands

and increasingly very specific requirements for the prevention of contamination, particularly in the nuclear, pharmaceutical, cosmetic, food, beverage, chemical and electronics industries. There are many Sikafloor® systems designed to meet even the strictest requirements of the latest cleanroom hygiene conditions.



IMPACT RESISTANCE, POINT LOADING



In areas where goods are mechanically handled such as production

areas, warehouses, loading bays and the like, compressive and dynamic loads are generated by the movement of these goods on the lines, forklifts and pallet trucks etc. It is essential to ensure that the stresses generated are not higher than the strength of the floor topping material and / or its bond to the substrate, which is reliably achieved with Sikafloor® systems.



WATERPROOFING



Sikafloor® systems can provide an impermeable seal to protect both the

concrete from attack by aggressive liquids and the underlying groundwater and the environment from the leakage of pollutants. This includes flexible and crack-bridging systems that help to ensure the reliable containment of any ecologically harmful materials, or conversely to maintain the purity of contained drinking water.



NEUTRAL ODOUR, VOC-FREE



Total solids, 100% solids, or solvent free flooring systems that

also have neutral odor and low VOC emissions should now always be considered wherever possible to be sustainable and help to meet Green Building objectives, which all helps to protect the environment. This is especially the case in occupied indoor / internal or closed areas, where Sika® ComfortFloor systems are the ideal solution.

PROJECT RELATED PERFORMANCE REQUIREMENTS



ELECTRICAL CONDUCTIVITY/ ESD



There is an increasing demand for conductive flooring solutions,

including ESD, DIF and ECF systems. These types of flooring systems are used to protect sensitive devices from damage or to avoid the potentially explosive effects in flammable atmospheres. Sika is a world leader in this technology for both floor and wall coatings.



CLEANING AND MAINTENANCE



In order to ensure that Sika flooring solutions stay in good condition

and continue to perform and function as required to protect your investment and give years of satisfaction, we also provide fully detailed cleaning and maintenance advice and guidelines.



THERMAL CONDUCTIVITY



Users can perceive the warmth of a floor to their feet very differently

and subjectively. In addition to the ambient room and floor surface temperatures, the thermal conductivity of the substrate is usually the most significant factor. Sika provides the highly insulated and elastic Sika® ComfortFloor solutions where this is a requirement.



MULTIPLE COLOR SHADES



The Sikafloor® range is available in almost every color shade with

stable pigments available and special colors can be made to order or matched to a client's specific requirements. This includes Sika flooring systems produced to all major national and international color standards including RAL, BS 4800 and NCS.



UV LIGHT RESISTANCE



Where color is important and / or where high UV Light radiation exposure

is anticipated, suitably resistant and light fast Sikafloor® Systems are available. This can be particularly important on exposed or partially exposed car park or balcony decks for example. Equally UV light and color stability should always be considered for any floors with doors or windows where natural sunlight enters the building for significant periods of time.



RESISTANCE TO FURNITURE CASTORS



The wheels or castors on many chairs and other furniture and

equipment are relatively small in diameter and therefore they can create heavy point loads on the floor. Only highly abrasion resistant or resilient flooring systems with proven performance such as many of the Sikafloor® systems should be used in these situations for long term durability.



VOC/AMC EMISSIONS



One of the main objectives for flooring and wall coatings in clean-

rooms is to prevent the potentially damaging effects of VOC/AMC's (Volatile Organic Compounds/ Airborne Molecular Contaminants) being released into the atmosphere and affecting the quality of the sensitive materials produced in these areas. The Sikafloor® CR systems are the 'state of the art' in this technology and have been tested to give the best performance on the global market.

CUT THE WAITING TIME IN BOTH NEW CONSTRUCTION AND REPAIR WORKS

THE SCHEDULED FLOORING “START” AND “FINISH” ON SITE, does not always match the overall construction time required (i. e. necessary waiting times / delays due to substrate condition or environmental limitations, etc.).

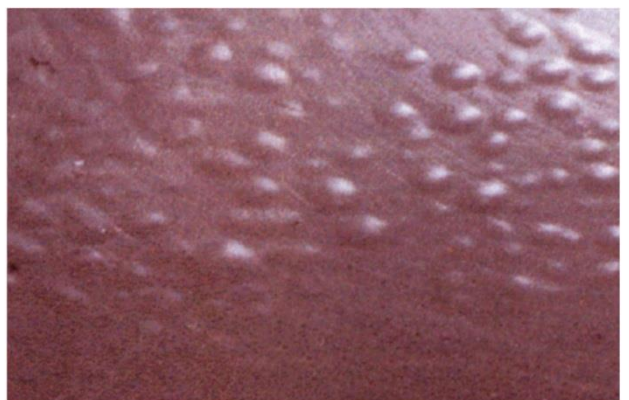
The floor finishes on most construction sites are one of the last applications and so they are usually done under time pressure. If you have to wait until the ideal conditions (pull-of strength 1.5 N/mm²) and humidity (<4 % pbv) in the concrete slab are achieved, then most flooring materials require a waiting time of at least 28 days, according to their data sheets and the respective standards. You can cut this waiting time significantly by using the unique intermediate layers Sikafloor®-81 or -82 EpoCem. These can be applied directly onto the new concrete after just 7 to 10 days and also directly on concrete substrates recently prepared by high pressure water-jetting, in refurbishment works for example.

An additional opportunity for the use of Sikafloor® EpoCem is when you are not sure if the concrete slab has an intact waterproofing membrane underneath it or not. Rising moisture can cause serious problems on ground bearing slabs for many types of resin based floor coatings, frequently leading to blistering or delamination.

The advantages of Sikafloor® EpoCem are based on the unique system components. It consists of an epoxy dispersion in a cementitious self-leveling mortar screed. Application thickness varies from 2 to 8 mm, dependent on the system. With this material you can achieve a fully homogeneous,

sound and smooth substrate for the floor topping. The combined epoxy-cement matrix forms a temporary barrier against rising moisture and damp concrete; it also provides a high strength substrate. This uniform and homogeneous intermediate layer allows over-coating with vapour impermeable high solids and high build resin based coatings within a short waiting time of 18 to 36 hours after application. There is no additional surface preparation and conditioning necessary to achieve a pore free smooth floor.

**Sika® EpoCem TECHNOLOGY
PREVENTS OR OVERCOMES
COATING FAILURES RELATED
TO COATING FRESH AND DAMP
CONCRETE.**



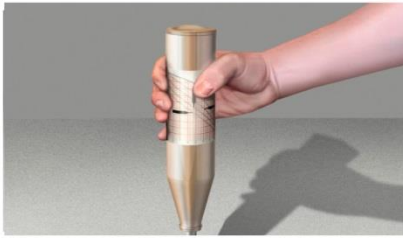
Sikafloor® APPLICATION PROCEDURES

Substrate Inspection and Preparation

THE CONCRETE SUBSTRATE IS THE BASIS OF A NEW FLOOR, WHETHER IT IS NEW OR EXISTING.

Thorough inspection and assessment are essential to determine its condition and the necessary surface preparation for a successful flooring system to be applied. The concrete substrate is the basis of a new floor, whether it is new or existing.

A durable bond must be achieved between the new flooring system and the substrate, which requires a clean and contaminant free, dry (according to the system requirements) and sound surface to be mechanically prepared to remove any cement laitance, loose or friable particles and provide the profile required for the selected floor system. The final surface should be vacuumed to remove any dust prior to the application.



MEASURING THE COMPRESSIVE STRENGTH

The compressive strength of the substrate should not be less than 25 N/mm² (25 MPa). To meet defined loads, a higher strength may be required. It is advisable to take a number of measurements across the floor and in all parts of the proposed installation to confirm the compressive strength i.e. with a Schmidt hammer.



MEASURING THE COHESIVE STRENGTH

Concrete floors generally have some cement laitance with low cohesive strength in the top few mm. This weak layer must always be removed during the substrate preparation. Withstanding stresses from concrete shrinkage, thermal shock or loading requires a minimum cohesive strength. This should be a ≥ 1.5 N/mm² (≥ 1.5 MPa) and this is usually measured by a number of Pull-off tests across the floor.



SUBSTRATE MOISTURE CONTENT

It is extremely important to measure the substrate moisture content because cement bound substrates should normally only be over-coated at a moisture level of < 4% pbv. ASTM D4263 is a simple test with a Polyethylene-sheet of at least 1 m² taped to the concrete surface. This should be left in position for at least 24 hours, prior to removal and testing. Moisture Meters such as the Tramex Concrete Encounter CME 4 can then give a clear reading of the moisture content as a % pbv. Moisture content > 4% by volume, or visible rising moisture (condensation) on the bottom of the sheet, indicates the need for additional drying time or the use of Sikafloor® EpoCem Technology.



SUBSTRATE MOISTURE CONTENT

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AMBIENT CONDITIONS

If atmospheric and climatic factors are ignored, serious flooring defects such as poor adhesion, water marks, blistering, irregular surfaces and inadequate curing may occur. The following must therefore be checked and recorded several times a day, before, during and after application to ensure that they are within the system limitations:

- Ambient temperature (air)
- Substrate temperature
- Relative humidity (air)
- Dew point



PREPARATION AND CLEANING

If not fully removed, any weak areas or cement laitance on the substrate will reduce the adhesion, performance and durability of any floor system. Concrete surfaces must therefore always be mechanically prepared to a sound substrate. Any dirt, dust, oils, grease or any other contaminants will also reduce or prevent adhesion of any topping, so these must also be removed by thorough cleaning and vacuuming of all residues.

Sikafloor® APPLICATION PROCEDURES

Product Mixing

Each Sikafloor® PRODUCT NEEDS TO BE THOROUGHLY MIXED PRIOR TO APPLICATION. THE MIXER USED SHOULD ALWAYS BE OF A LOW SPEED, COMPULSORY/FORCED ACTION TYPE.



DRILL AND MIXING PADDLE

This mixing equipment is recommended for unfilled binders and the mixing of liquid components of filled screeds and mortars (for filled screeds and mortars please use the Double Mixing Paddle or Forced Action Pan Mixer equipment outlined below). First of all, premix Component A. Then add Component B and mix thoroughly for a minimum of 3 minutes until the mix is fully homogeneous.



DOUBLE MIXING PADDLE (FREE HAND OR ON A STAND)

This is the ideal tool for all types of filled binder systems, including screed and mortar mixes. First of all, mix Components A + B together, then put the pre-mixed A + B Components or the liquid binder into the mixing pail, and then add the powder Component C whilst slowly stirring constantly. Mix for a minimum of 3 minutes until the mix is fully homogeneous.



SIKA® FULL RANGE SOLUTIONS FOR CONSTRUCTION & INDUSTRY

Concrete



Refurbishment



Sealing & Bonding



Waterproofing



Flooring



Roofing



Industry



FFI



WHO WE ARE

Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, façades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika's product lines feature high quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

SIKA PHILIPPINES

Sika Philippines, Inc., a wholly-owned subsidiary of the Sika Group, has been serving the Philippine Market since March 1994.

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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BUILDING TRUST

