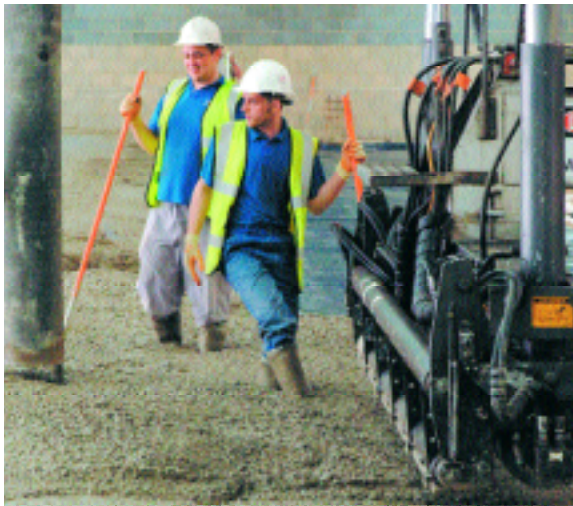


Construction



## Cementitious Flooring and Concrete Hardeners Solutions with Sikafloor®



# Solutions with Sikafloor® Cementitious Flooring and Concrete Ha

## Get the building watertight

- Use a Sika®-Trocal roofing system.

## Get the concrete right

- The mix design is tailored to local cement and aggregates and uses superplasticiser technology (**Sikament®/Viscocrete®**) to achieve high workability and strength with a low water:cement ratio and economic cement content. Sika steel fibres allow 'joint-free' floors to become possible whilst Sika jointing systems armour and protect movement joints with excellent load transfer. Shrinkage is minimised using expansive or shrinkage compensating admixtures.

## Why harden concrete?

- Concrete alone has limitations in terms of dusting, porosity, chemical, abrasion and impact resistance and aesthetics. In order to dramatically improve a concrete floors' lifespan it can be hardened or 'armour plated', along with adding colour and vitality.

## What is a surface hardener?

- Either a chemical hardener (liquid) or a dry shake (powder). Chemical hardeners impregnate the surface of old or new concrete and react with the constituents, thus improving the properties. Dry shake hardeners are applied to new, wet concrete to form a monolithic armoured skin on the surface, some 2-3mm thick. Sika-Armorex have a full range of all types of hardener, from economy to ultra high performance. All dry shake hardeners have the advantage of fibre suppressant qualities where steel fibres are used.

## What differentiates them?

- With chemical hardeners the type and solids content primarily affect performance. In dry shake hardeners the main factor is aggregate type, proportion and grading.

### Sikafloor®-1 MetalTop

(Armorex Supertop) is unique in using the highest quality, toughest metal alloy aggregate. That is why we have 35 years track record of floors which are still as good as new.

\* For curing to ASTM C-309, use Sikafloor®-ProSeal 90/W or Sikafloor®-ColourSeal.



## Concrete Hardening

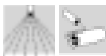
- Economic surface hardening
- Good abrasion resistance
- Prevents dusting



### Sika® System

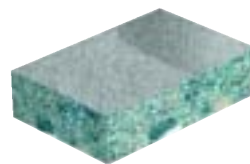
- Sikafloor®-CureHard 24

### Application method



## Concrete Curing and Sealing

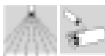
- Hardens concrete
- Prevents dusting
- Curing to ASTM C-309\*
- Use on new or old concrete



### Sika® System

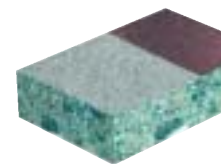
- Sikafloor®-ProSeal
- Sikafloor®-ProSeal W

### Application method



## Economical Coloured Coating

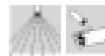
- Cures, seals and hardens
- Colourful, tough, coating
- Curing to ASTM C-309\*
- Ideal economical coating system



### Sika® System

- Sikafloor®-ColourSeal

### Application method



# Hardeners



## System Components

- Sikafloor®-CureHard 24**  
Economic silicate based hardening and sealing liquid
- Sikafloor®-CureHard 181**  
Economic acrylic curing hardening and sealing liquid
- Sikafloor®-ProSeal**  
Industry leading clear acrylic polymer solution to cure harden and seal.
- Sikafloor®-ProSeal 90**  
High efficiency clear acrylic polymer solution to cure harden and seal.
- Sikafloor®-ProSeal W**  
High efficiency water based clear acrylic polymer solution to cure, harden and seal.
- Sikafloor®-ColourSeal**  
High efficiency coloured acrylic coating to cure, colour, harden and seal.
- Sikafloor®-1 MetalTop**  
(Armorex Supertop)  
Coloured metal alloy based dry shake hardener.
- Sikafloor®-2 SynTop**  
(Armorex Armorshield)  
Coloured synthetic hard aggregate based dry shake hardener.
- Sikafloor®-3 QuartzTop**  
(Armorex Armorquartz)  
Coloured mineral based dry shake hardener.
- Sikafloor®-FibreShield**  
Economic blended fibre suppressant dry shake.

## Project Related Needs and the Function of Flooring

-  Mechanical Resistance is defined by type (transport load, type of tyres, contact area) and frequency of exposure. Select a suitable finish.
-  Slip Resistance is always a question of surface design. The specific environment defines the limits.
-  Fire Resistant.
-  Available in a range of colours.
-  Floor coating on green and damp concrete.
-  Chemical Resistance according to Technical Data Sheet is dictated by the choice of finish.

### Colourful Surface Hardening

- Economical hardener
- Good abrasion resistance
- Allows bright colours



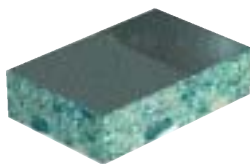
- Sika® System**
- **Sikafloor®-3 QuartzTop**  
(formerly Armorex Armorquartz)
  - **Sikafloor®-ProSeal**

#### Application method



### Tough, Economical Surface Hardening

- Tough and durable
- Good abrasion resistance
- Good impact resistance



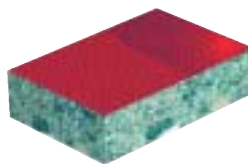
- Sika® System**
- **Sikafloor®-2 SynTop**  
(formerly Armorex Armorshield)
  - **Sikafloor®-ProSeal**

#### Application method



### Heavy Duty Hardening

- Excellent abrasion resistance
- Excellent impact resistance
- Extreme durability
- Antistatic properties



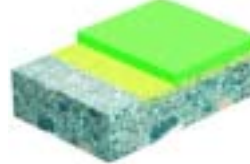
- Sika® System**
- **Sikafloor®-1 MetalTop**  
(formerly Armorex Supertop)
  - **Sikafloor®-ProSeal**

#### Application method



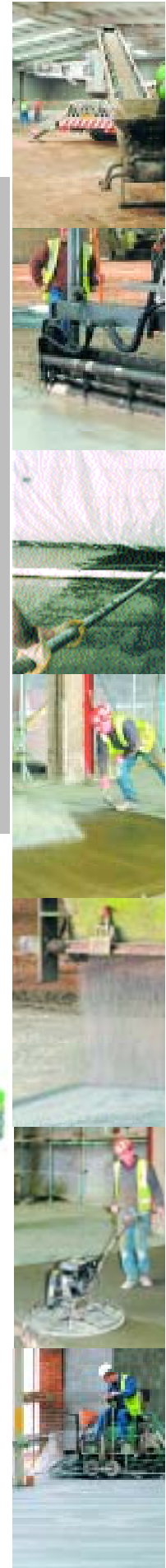
### Additional Coating

- To enhance chemical resistance or specific aesthetic requirements
- To comply with other surface requirements



- Sika® System**
- **Sikafloor®-261**
  - **Sikafloor®-381**  
defined by specific requirements.

#### Application method



## Case Studies

### Ministry of Defence, Tidworth, UK

**Sikafloor®-1 MetalTop**  
(Armorex Supertop)

#### Situation

- Tank maintenance workshops.

#### Requirements

- Very high abrasion resistance.
- High impact resistance.
- Extreme durability to withstand constant use by tracked vehicles.

#### Sika Solutions

- **Sikafloor®-1 MetalTop** metal alloy based dry shake concrete floor surface hardener.
- **Sikafloor®-ProSeal** curing/sealing compound.



### Tatu Bar, Belfast, Northern Ireland

**Sikafloor®-2 SynTop**  
(Armorex Armorshield)

#### Situation

- New flooring construction for restaurant.

#### Requirements

- Tough, durable floor with natural concrete feel.
- Foot and trolley traffic.
- Polished finish.

#### Sika Solutions

- **Sikament®** superplasticiser concrete mix.
- **Sikafloor®-2 SynTop** synthetic hard aggregate based dry shake surface hardener.
- **Sikafloor®-ProSeal** curing/sealing compound.
- **Sikaflex® PRO-3WF** joint sealant.



## Case Studies

### Makro Cash & Carry, Rayleigh, Essex

**Sikafloor®-3 QuartzTop**  
(Armorex Armorquartz)

#### Situation

- 8,000 sq. metres of flooring for newbuild cash and carry outlet.

#### Requirements

- Floor surface with long-term durability, high abrasion and slip resistance.

#### Sika Solutions

- **Sikafloor®-3 QuartzTop** mineral based dry shake concrete floor surface hardener.
- **Sikafloor®-ProSeal** curing/sealing compound.



### Royal Mail Rail Net Hub, Willesden, London

**Sikafloor®-1 MetalTop**  
(Armorex Supertop)

#### Situation

- Newly constructed concrete platforms and sorting area floors.

#### Requirements

- Very high abrasion resistance
- Impact resistance
- Frequent wheeled traffic combined with high point loading
- Enhanced slip resistance to platform edges.

#### Sika Solutions

- **Sikafloor®-1 MetalTop** metal alloy based dry shake concrete floor surface hardener.
- **Sikafloor®-ProSeal** curing/sealing compound.



# Solutions with Sikafloor®

## Cementitious Flooring and Concrete Hardeners

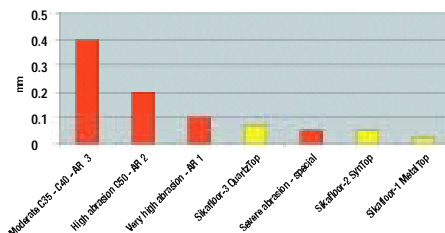
### Liquid Hardeners

Curing Hardening Sealing Compounds. Comparison of curing efficiency (ASTM C-309) and abrasion loss (Taber)



### Dry Shake Hardeners

Abrasion wear according BS 8204

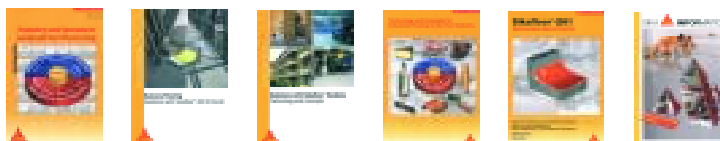


### Sikafloor® Dry Shake Systems Benefits

- Durable and Tough** - Superior abrasion and impact resistance for areas of high use and wear. **Sikafloor®-1 MetalTop** (Armorex Supertop) provides a surface some 20+ times more durable than a standard concrete.
- Low whole life cost** - With a low maintenance high performance finish and low installation costs these systems provide the ultimate in cost efficiency.
- Rapid Installation** - Can be installed to any size of floor either manually or by machine at the same time as the concrete or screed is placed.
- Low maintenance** - A tough colourful surface which improves in appearance with age. Sealed with **Sikafloor®-ProSeal** the surface will have good resistance to a range of oils and chemicals.
- Slip resistance** - Dry shake hardeners give good slip resistance in general use, which improves with age. Additional slip resistance is given when **Sikafloor®-1 MetalTop** is treated to expose the hard aggregate matrix.
- Static Dissipative** - **Sikafloor®-1 MetalTop** allows dissipation of static charges.
- Guaranteed** - Available with a 25 year durability statement, supported by British Board of Agrément Approval - ask us for details.

**Sikafloor®** Dry Shake colour range:  
Natural, Red, Plum, Mid grey, Light grey, Classic grey, Green.  
*Custom colours possible - ask for details.*

### Also available from Sika®



The combined Sika-Armorex range of flooring systems includes concrete admixtures, dry shake toppings, curing, hardening and sealing compounds; cementitious, epoxy, acrylic and polyurethane resin screeds and coatings.

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out

of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.



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