

# Sikafloor®-1 Metal Top

## Metallic Dry Shake Floor Hardener

### Product Description

**Sikafloor®-1 Metal Top** is a one part, pre-blended, coloured, metallic dry shake hardener for concrete comprising of cement, hard metallic ferro-silicon aggregates, special admixtures and pigments. Suitable for use in hot and tropical climates.

### Uses

- **Sikafloor®-1 Metal Top** provides a non-staining, ultra hard wearing, metallic dry shake topping for monolithic floors. When sprinkled and trowelled into fresh wet concrete floors, it forms a coloured, extremely wear resistant smooth and dense surface
- Typical uses are in warehouses, heavy duty, prestige and high durability requirement distribution centers, factories, manufacturing facilities, transport terminals, power stations, workshops, slaughter houses etc.

### Characteristics Advantages

- Highest wear resistance rating
- Excellent impact resistance
- Increased resistance to oils and grease
- Non staining
- Cost effective, long life floor
- Maintenance free, easily cleaned
- Slip resistant surface possible
- Dust proof
- Anti-static performance possible
- Available in a wide range of colours

### Approvals / Standards

Conforms to the requirements of BS 8204, BS 2050, DIN 51953, EN 206/1, ACI 304.1R 96 and TR 34  
Awarded BBA (British Board of Agrément) Certificate No: 97/3334

### Product Data

#### Appearance

Powder

#### Colours

Natural (concrete grey)  
Other colours upon request

#### Packaging

25 kg bags

#### Storage Condition

Store in original sealed packaging in a cool and dry environment at temperatures between +5°C and +30°C

#### Shelf Life

Minimum 12 months from production date if stored in original, unopened and undamaged sealed packaging



## Technical Data

<b>Density</b>	Approximately 2.5 kg/lt (bulk density)									
<b>Layer Thickness</b>	2.5 to 3.0 mm at the recommended coverage of approximately 7.0 kg/m <sup>2</sup>									
<b>Fire Rating</b>	Non flammable; UK Warrington Fire Research Report N° 12560 dated 22.12.95 (BS 476 Part 6:1989) Non toxic fumes; UK Warrington Fire Research Report N° 12563 dated 22.12.95 (BS 476 Part 7:1987) Non sparking alloy particles; UK Warrington Fire Research Report N° 12937 dated 25.04.96									
<b>Electrostatic Properties</b>	Anti-static flooring(BS 2050 Method A.4.1:1978) UK Rapra Technology Ltd., Project Ref. 180/A1647, dated 21.04.95  5000 Volts decay time < 0.1 secs. (BS 2782) UK Rapra Technology Ltd., Project Ref. D0108 CTR NE1107, dated 27.02.97									
<b>Slip Resistance (typical to BS 8204)</b>	<table border="1"><thead><tr><th></th><th>Normal</th><th>Chemically aged</th></tr></thead><tbody><tr><td>Dry</td><td>30</td><td>50</td></tr><tr><td>Wet</td><td>65</td><td>65</td></tr></tbody></table>		Normal	Chemically aged	Dry	30	50	Wet	65	65
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<b>Abrasion Resistance</b>	Class "Special" Severe abrasion resistance (Less than 0.05 mm wear depth) (Conforms to BS 8204) UK Aston University, Report N°: AL/AR121297, dated 12.12.97 4146 mg  (H-22 / 1000 g / 1000 c) (UNE 48.250-92 / ASTM D-4060 (Taber Abrader)) GEOCISA Ref. P-02/01645 dated Jan. 9, 2003									

\*All above values are approximate.

## System Information

<b>System Structure</b>	Use products mentioned below as indicated in their respective Product Data Sheets. Substrate: Fresh concrete slab (see Substrate Quality below) Dry shake: Manual or machine application of <b>Sikafloor®-1 Metal Top</b> . Levelling of surface by means of power trowel or laser screed. Final smoothing with power trowel. Curing compound:Low pressure pump application of Sikafloor® ProSeal-22 /18 / or Sikafloor® ColourSeal.
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## Application Details

<b>Substrate Preparation</b>	<ul style="list-style-type: none"><li>■ The concrete deliveries should be of consistent quality.</li><li>■ A concrete slump in the range 75 to 110 mm will normally give best results. The slab should be of good quality concrete with a minimum water/cement ratio consistent with the production of a fully compacted slab.</li><li>■ The compressive strength should be a minimum of 25 N/mm<sup>2</sup>.</li></ul> Use of <b>Sikament</b> or <b>Sika Viscocrete</b> superplasticizers are advised to ensure the optimum quality of concrete and where fibres are used, maximum dispersion thereof within the mix.
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<b>Consumption</b>	Approximately 7 kg/m <sup>2</sup> . (These figures do not allow for surface porosity, profile or wastage).
<b>Application Conditions / Limitations</b>	
<b>Substrate Temperature</b>	+5°C min. / +35°C max.
<b>Ambient Temperature</b>	+5°C min. / +35°C max.
<b>Relative Air Humidity</b>	30% r.h. min. / 98% r.h. max.
<b>Application</b>	<p>(i) Mechanical Application - Automatic spreader in conjunction with a laser screeder: Spread <b>Sikafloor®-1 Metal Top</b> evenly onto the concrete at 7 kg/m<sup>2</sup> in one application immediately after screeding.</p> <p>(ii) Manual application: Dependent on the conditions, remove the surface “bleed” water or allow it to evaporate. Sprinkle <b>Sikafloor®-1 Metal Top</b> onto the screeded concrete evenly in 2 stages (first stage: 4 kg/m<sup>2</sup>; second stage: 3 kg/m<sup>2</sup>). Care must be taken to apply the product without creating ripples etc. in the concrete surface. Overall application rate 7 kg/m<sup>2</sup>. Casting <b>Sikafloor®-1 Metal Top</b> powder carelessly or further than 2 metres from point of casting will reduce the consistency of finish.</p> <p>Compaction The first application must be worked into the slab followed immediately by the application of the second stage quantity of <b>Sikafloor®-1 Metal Top</b>.</p> <p><u>Notes</u></p> <ul style="list-style-type: none"> <li>■ Never add water to the surface where the dry shake has been applied.</li> <li>■ <b>Sikafloor®-1 Metal Top</b> results in the slab surface becoming “stiff” more quickly than usual. Careful trimming must take place along the edges where adjoining slabs are to be poured.</li> <li>■ Final finishing to close pores and remove undulations can be achieved either by hand or powered trowels.</li> </ul>
<b>Cleaning of Tools</b>	Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.
<b>Application Time</b>	<p>Application time for dry shake products is influenced by every variable which affects the placing of concrete, and can therefore vary substantially, depending on the prevailing conditions.</p> <p>With mechanical application using automatic spreader and laser screed, the spreading can start almost immediately after the concrete has been leveled, to allow for the hydration of the dry shake. Compaction with the trowel can start as soon as the weight of the power trowels is supported by the concrete.</p> <p>With manual application, the dry shake must be spread once the concrete can be stepped on, without leaving a print deeper than 3 - 5 mm.</p> <p>Periodical checking of the condition and development of the concrete will determine the correct time frame for each stage and sequence of application.</p>

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**Notes on Application / Limitations**

The application of the dry shake powder must not be carried out in strong wind or draughts.

Variations in concrete characteristics such as water content and cement may lead to slight colour variations.

Dry shake hardeners give a finish to concrete with some colour variation across the floor due to the natural variability of the concrete onto which they are applied.

To ensure optimum of colour consistency, it is essential that the floor laying operation is as clean and protected from the environment as possible.

Colour variation during the drying out period is normal for this system and is to be expected.

Every effort must be made to ensure an even application of **Sikafloor®-1 Metal Top**. Correct timing and trowelling techniques are essential.

At low relative humidities (below 40%), efflorescence can appear on the surface.

At high relative humidities (above 80%), bleeding, slower curing and hardening can occur and extended finishing operations be required.

Slip resistance can be enhanced through chemical ageing. If necessary refer to Method Statement for Application or contact the local Technical Services Department for details.

**Joins**

After finishing operations and completing saw cuts, clean off any residual saw lubricant / slurry without delay. Joints can be filled with Sikaflex® PRO-3WF or another appropriate Sikaflex® sealant in accordance with the floor design requirements.

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**Curing Details**

Cure and seal **Sikafloor®-1 Metal Top** immediately after finishing using Sikafloor®-ProSeal-22 / -18 or Sikafloor®-ColourSeal. (Refer to separate Product Data Sheet).

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**Applied Product ready for use**

Substrate temperature	+10°C	+20°C	+30°C
Foot traffic	~ 18 hours	~ 12 hours	~ 8 hours
Fully serviceable	~ 10 days	~ 7 days	~ 5 days

The above values are dependent upon the concrete reaching its design strength for serviceability and will be affected by changing ambient conditions, particularly temperature and relative humidity.

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**Floor Maintenance**

To maintain the appearance of the floor after application, **Sikafloor®-1 Metal Top** must have all spillages removed immediately and be regularly cleaned using rotary brushes, mechanical scrubbers, scrubber dryers, high pressure washers, wash and vacuum techniques, etc., using suitable detergents and waxes.

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**Notes**

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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**Local Restrictions**

Please note that as a result of specific local regulations the performance of this product may vary from country to country.

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## Safety

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

## Legal Notes

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 accordance with Sika's recommendations. 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 user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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 local Product Data Sheet for the product concerned, copies of which will be supplied on request



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