

PRODUCT DATA SHEET

Sikafloor® SynTop-430

(formerly MTop 430)

Premixed dry shake surface floor hardener

DESCRIPTION

Sikafloor® SynTop-430 is a ready to use blend of abrasion resistant manufactured mineral aggregate and cement which is applied as a dry shake to the surface of fresh concrete or screeds.

Sikafloor® SynTop-430 will provide continuous protection to concrete floors against wear, impact and abrasion and a high resistance to various industrial chemicals, oils, greases, detergents and hydraulic fluids found in the aviation industry.

USES

Sikafloor® SynTop-430 is designed to ensure improved durability in applications where the floor is subjected to medium and heavy traffic and where a non-dusting surface is required. It will improve and enhance performance of all concrete floors, such as:

- Workshops
- Power stations
- Garages
- Car parks
- Warehouses
- Loading bays
- Factories
- Shipyards
- Aircraft hangars
- Traffic decking
- Car washes
- Helicopter pads

CHARACTERISTICS / ADVANTAGES

- Premixed, offering factory-controlled quality assurance
- Applied monolithically to fresh concrete
- Quick application and finishing results in considerable time savings
- Ease of application
- Joints can be provided with better protection by addition of extra material at edges of bays
- Wear, abrasion and impact resistance are superior to normal concrete
- Non-oxidising
- Slip-resistant finish can be obtained
- High impermeability compared to concrete under the same conditions
- Sikafloor® SynTop-430 forms an integral part of the floor surface and will not delaminate or peel
- Non-dusting
- For internal and external use
- Easy to clean
- Economic installation
- Maintenance free, long life performance

PRODUCT INFORMATION

Composition	Non-metallic, inert high quality aggregates, proprietary chemicals, pigments and cement
Packaging	25 kg bags
Shelf life	12 months from date of production
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight, heat and moisture.

TECHNICAL INFORMATION

Abrasion resistance	~1.34 g (7 days curing) Applied at 5 kg/m ² exhibited > 300 % greater abrasion resistance than control concrete sample.	(ASTM C1353-98)
Resistance to impact	0.15 mm - No sign of crack or disbonding was observed	(MIL-D-3134 J (NAVY))
Chemical resistance	Resistant to motor oils, mineral oils, salt solutions 10 %, sea water, soda solution 25 %, when cured as per recommendation.	

APPLICATION INFORMATION

Consumption	Typical applications can be from 3 – 7 kg/m ² , however for most industrial applications of min. 5 kg/m ² coverage is recommended. Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment. For more details, please contact Sika Technical Services Department.
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BASIS OF PRODUCT DATA

- 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.
- Internal Reference - Version: MBS_CC-UAE/Top_430_10_94/v3/06_15/v4/10_19

FURTHER INFORMATION

Method Statement

IMPORTANT CONSIDERATIONS

- Dry shake applications should not take place in direct sunlight or when hot winds are blowing. This will avoid "bread crusting" occurring i.e. top 5-10 mm of surface dries whilst concrete beneath is still wet. This often results in tearing of the surface when trowelling.
- As with any concrete slab or bay, curing is of paramount importance and should take place immediately upon completion of finishing.
- Subsequent coatings and finishes may be applied but will depend on the curing compound, surface texture, etc. (refer to Sika Technical Services Department for advice).

- Damaged finish due to excessive drying of the surface:** Exposure to environmental conditions during application can cause cracking and colour inconsistencies. Do not apply the Product in strong wind or draughts. Keep the floor laying operation as clean and protected from the environment as possible.
- Poor finish due to uneven application:** Poor application practices can result in an inconsistent finish. Ensure an even application of the Product and use correct timing and trowelling techniques.
- Low relative humidity below 40 %:** Efflorescence can appear on the surface at low relative humidity.
- High relative humidity above 80 %:** Bleeding, slower curing and hardening can occur, and extended finishing operations may be required at high relative humidity.
- Prevailing conditions affecting application time:** 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.

ECOLOGY, HEALTH AND SAFETY

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

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

In accordance with ACI 201 - 2R77 & ACI 302-1 R-89, a well-proportioned Concrete Mix Design is essential. The concrete supplier should ensure that cement contents, w:c ratio and slump are generally in accordance with the following minimum standard: Cement (SRC or OPC): Min. 320 kg / m³

W:C ratio	Max. 0.50 Min. 0.40
Slump	Ideally 75 mm
Strength	Min. 31 N/mm ²

Concrete should not segregate and bleed or contain more than 3% air. When applying to microsilica concrete special care must be taken to ensure the dry shake is applied at the correct time. Sikament® or Sika® Plastiment® water reducing admixtures are recommended for concrete placement and optimum performance. Screeds to which Sikafloor® SynTop-430 is to be applied, should have a minimum thickness of 75 mm. Following placement, concrete should be levelled off with a straightedge and then vibrated.

The surface is then floated with a wooden float ensuring that it is not closed. Any bleed water should be removed. (Avoid sponge type absorbents). Thereafter sprinkle Sikafloor® SynTop-430 along edges of bays (approx. 80 mm strips) where expansion and construction joints will be located. Float into surface using a wooden float.

APPLICATION METHOD / TOOLS

Sikafloor® SynTop-430 is ideally applied to a surface which is neither too wet nor too dry. Ambient temperatures will dictate when the material is to be applied. Generally, in temperatures of 35 - 45°C a waiting period of 30 - 40 minutes is recommended. This may need to be extended in temperatures of less than 35°C.

Using a raised trestle which spans the slab, the material is broadcast by hand onto the wet concrete surface. The application is carried out in two stages.

1. Apply two thirds of the required material to the concrete ensuring uniform distribution.
2. Allow applied material to absorb moisture from the concrete surface; a uniform darker colour will be apparent.
3. Using a wooden float, float Sikafloor® SynTop-430 into the concrete ensuring material becomes an integral part of the surface.
4. Apply the balance of material. Again, wait until material has obtained a darker colour before floating with a wooden float.
5. When surface is sufficiently firm enough to take the weight of a man leaving only minor indentations, Sikafloor® SynTop-430 should be finished off by means of a power trowel. A smooth slip resistant finish can be obtained, but the surface should not be overworked.
6. If manual finishing with steel trowels is to be undertaken, this should take place before concrete becomes firm enough to take foot traffic.

CURING TREATMENT

Curing should be carried out immediately after the final trowelling operation has been completed. This can be done by either covering with polyethylene sheets or by the application of curing compound. The use of Sika® Antisol®-181 at a rate of 1 L / 5 m² is recommended. Further advice on the correct selection of curing compounds will be provided by Sika Technical Services Department as these may differ depending on the type of subsequent treatment to be applied.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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 must 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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Product Data Sheet

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