

PRODUCT DATA SHEET

SikaFume[®] SF 100

(formerly MasterLife[®] SF 100)

Densified microsilica.

DESCRIPTION

SikaFume[®] SF 100 is a compacted microsilica mineral admixture, formulated to produce extremely strong and durable concrete. SikaFume[®] SF 100 is a micro-filler material that physically fills the spaces between cement particles; It drastically decreases permeability and reduces the size and number of capillaries that allow contaminants to enter the matrix.

USES

- Steel-reinforced concrete structures or wet shotcrete applications, exposed to de-icing salts or sea salts carried by the wind.
- Any construction project that requires the protection provided by highly durable, low permeability concrete.
- Projects that require high resistance (high performance) concrete.

PRODUCT INFORMATION

| | |
|-----------------------------------|---|
| Packaging | 20 kg bag. |
| Shelf life | 12 months from the date of manufacture. Depending on storage conditions, the shelf life may be longer than stipulated. Please contact your sales representative for recommendations regarding proper use and dosage in the event that SikaFume [®] SF 100 has exceeded the shelf life. |
| Storage conditions | SikaFume [®] SF 100 is stored, handled and dosed similar to cement or fly ash. It can be stored in silos when in bulk. The packaged product should be stored in a dry area avoiding moisture. |
| Total chloride ion content | Does not contain chlorides. SikaFume [®] SF 100 admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, in prestressed concrete or concrete placed in galvanized steel roof and floor systems. No calcium chloride or intentionally added chloride-based ingredients have been added in the manufacture of SikaFume [®] SF 100. |

FEATURES

- Greater cohesiveness of the mixture.
- Less exudation.
- Improved performance.
- Increase in the service life of the structure.
- Greater development of mechanical resistance.
- Greater modulus of elasticity.
- Lower permeability increasing durability.
- Greater resistance to sulfate attack.
- Greater resistance to the alkali-silica reaction.

CERTIFICATES AND TEST REPORTS

SikaFume[®] SF 100 meets the requirements of ASTM C 1240, Standard Specification for Microsilica Used in Concrete and Hydraulic Cement Mortar.

APPLICATION INFORMATION

| | |
|---------------------------|---|
| Recommended dosage | It is recommended to use SikaFume® SF 100 for concrete or wet shotcrete applications in a dosage range of 5% to 15% by weight of cementitious material. |
| Dispensing | SikaFume® SF 100 is dosed and added in the concrete production plant in a similar way to cement or other cementitious materials such as fly ash. It can be dosed in a central mixer or mixer truck. |
| Compatibility | SikaFume® SF 100 additive can be used with portland cements approved under ASTM, AASHTO or CRD specifications. It is compatible with most concrete admixtures, including all Sika® admixtures. The use of SikaFume® SF 100 is recommended with high range water reducing admixtures, such as the Viscocrete® line, to obtain maximum workability, keeping the water-cement ratio low. |

SYSTEM INFORMATION

| | |
|-------------------------|--|
| System structure | SikaFume® SF 100 is a micro-filler material that physically fills the spaces between cement particles; It drastically decreases permeability and reduces the size and number of capillaries that allow contaminants to enter the matrix. Compared to pozzolan, SikaFume® SF 100 microsilica reacts chemically within the cement matrix to increase the amount of hydrated calcium silicate (CSH gel) that is formed. CSH gel is the adhesion agent that holds the matrix of a cementitious mixture together in its hardened state. Additional CSH gel increases strength and decreases permeability. |
|-------------------------|--|

BASIS OF PRODUCT DATA

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

ECOLOGY, HEALTH AND SAFETY

APPLICATION INSTRUCTIONS

MIXING

SikaFume® SF 100 is dosed and added in the concrete production plant in a similar way to cement or other cementitious materials such as fly ash. It can be dosed in a central mixer or mixer truck.

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.

Sika Gulf B.S.C. (c)
Tel: +973 177 38188
Email: info@bh.sika.com
Sika Kuwait Cons. Mat. & Paints Co WLL
Tel: +965 22 282 296
Email: sika.kuwait@kw.sika.com
Web: gcc.sika.com

Sika UAE LLC
Sika MB Construction Chemicals LLC
Sika International Chemicals LLC
Tel: +971 4 439 8200
Email: info@ae.sika.com
Web: gcc.sika.com

Sika Saudi Arabia Limited
Sika Construction Chemicals for Manufacturing LLC
Riyadh / Jeddah / Dammam / Rabigh
Tel: +966 12 692 7079
Email: info@sa.sika.com
Web: gcc.sika.com

Sika LLC - Oman
Master Builders Solutions LLC (part of Sika)
Tel: +968 22 826 500
Email: info@om.sika.com
Web: gcc.sika.com



ISO 9001, 14001, 45001 – SGS
-Sika UAE LLC
-Sika International Chemicals LLC
-Sika Gulf B.S.C. (c)
-Sika MB Construction Chemicals for Manufacturing LLC
-Sika Saudi Arabia Limited
-Sika Kuwait Cons. Mat. & Paints Co WLL
-Sika Oman LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



Product Data Sheet
SikaFume® SF 100
September 2024, Version 01.01
02140300000002082

