

PRODUCT DATA SHEET

Sika® Aer Solid

Hollow polymer microspheres for artificial air pores in concrete to increase freeze-thaw resistance

DESCRIPTION

Sika® Aer Solid can be utilised instead of air-entraining agents for the reliable production of mortar and concrete with high resistance to freezing/thawing and de-icing salts.

USES

- Components of bridges, road and hydraulic construction
- Concretes with high compressive strength and high resistance to freezing/thawing and de-icing salts
- Very flowable concretes for products where the air pore stability is difficult
- Very rigid concretes where air pore introduction is difficult
- Sprayed concrete with high resistance to freezing/thawing and de-icing salts
- Difficult conditions e.g. long transportation times or pumping pipelines and/or use strong-acting compression devices

CHARACTERISTICS / ADVANTAGES

Sika® Aer Solid are tiny prefabricated air bubbles with elastic plastic envelopment. They work similar to those air pores created by air-entraining agents:

- An expansion possibility for freezing water
- A reduction of the capillary suction effect
- A substitute of fines
- This causes in mortar and concrete:
 - A high resistance to freezing/thawing and de-icing salts
 - A reduced capillary water absorption
- An improved workability by means of "ball bearing effect"

The advantages of Sika® Aer Solid compared to conventional air-entraining agents are:

- Easily obtaining of a high resistance to freezing/thawing and de-icing salts even under difficult conditions
- No rising to the surface even in very flowable concretes
- Low influence on the compressive strength

APPROVALS / CERTIFICATES

European Technical Approval ETA-13/0363
 Concrete and reinforced concrete according to DIN EN 206-1/DIN 1045-2 including high-strength concrete
 Sprayed concrete according to DIN 18551
 Applicable in concrete with alkali-reactive aggregates (Alkaline Directive 4.3.2 (1))

PRODUCT INFORMATION

| | |
|----------------------------|--|
| Composition | Acrylonitrile polymer |
| Packaging | Plastic bag: 2 kg 8 bags/box, space required per box: 0.16 m ³ 12 boxes shrink wrapped on a Euro deposit pallet |
| Appearance / Colour | Paste / White |

| | |
|--------------------------------|--|
| Shelf life | 60 months from date of production |
| Storage conditions | The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. |
| Density | 0.2 kg/dm ³ at +20°C |
| Equivalent sodium oxide | ≤ 0.5% |

APPLICATION INFORMATION

| | |
|---------------------------|--|
| Compatibility | Sika® Aer Solid should be preferably added with the aggregates, in any case before adding the superplasticizer. Limit the mixing time to the necessary mixing process. |
| Recommended dosage | 3.5 kg/m ³ with concrete according to DIN EN 206-1/DIN 1045-2 7 kg/m ³ with sprayed concrete according to DIN 18551 |
| Dispensing | The presence of Sika® Aer Solid in fresh concrete can be verified by washing out according to ASTM C-173/C- 173M-01. Testing in an air void pot will produce incorrect results. The Roll-A-Meter value as a part of the required dosages must be determined within the context of the initial testing. A CDF test according to DIN 12390-9/CEN TS, Section 7 must be performed within the context of the initial testing. |

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.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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. Further notes and information data sheets on product safety and disposal can be found on the Internet at www.sika.de.

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 Deutschland GmbH
Concrete
Peter-Schuhmacher-Straße 8
69181 Leimen
Telefon: +49 06224 988-04
Telefax: +49 06224 988-522
EMail: leimen@de.sika.com



PRODUCT DATA SHEET
Sika® Aer Solid
July 2020, Version 01.01
021403021000000103

SikaAerSolid-en-DE-(07-2020)-1-1.pdf

