

SikaAer® Solid

Prefabricated air bubbles

Product Description

SikaAer® Solid is used for mortar and concrete with high resistance to freezing/thawing and de-icing salts.

Uses

- Bridges, roads and marine constructions components
- Concrete with high compressive strength and high resistance to freezing/thawing
- Very flowable concrete e. g. SCC, where it is difficult to keep normal air bubbles in
- Very stiff concrete, where it is difficult to introduce air
- Shotcrete with high resistance to freezing/thawing and de-icing salts
- Difficult conditions e. g. long transportation time, long pumping distances, use of strong compaction equipment

Characteristics / Advantages

SikaAer® Solid consists of small prefabricated air bubbles with an elastic plastic envelope. Similar to the air pores generated by air-entraining agents they provide

- Expansion space for freezing water
- Reduced suction of capillary pores
- Replacement of fines

This supports in mortar and concrete

- High resistance to freezing/thawing and de-icing salts
- Reduced capillary water absorption
- Improved workability by means of „ball bearing effect“

The advantages of SikaAer® Solid compared to conventional air entraining agents are the following:

- No up floating even with very flowable concrete
- Low influence on compressive strength

Tests

Approval / Standards

Approval of the German Institute of Construction Technology (DIBt)
No. Z-3.212-1948:

- Concrete and reinforced concrete according to DIN EN 206-1 / DIN 1045-2 including high-strength concrete
- Sprayed concrete according DIN EN 14487/DIN 18551

Applicable in concrete with alkali-reactive aggregates.

Applies for European technical approval (ETA)

Product Data

Appearance / Colours White paste

Chemical Base Acrylonitril-Polymer

Density 0,2 g/cm³



Equivalent as % Na₂O	≤ 0,5 M.-%
Packaging	Plastic bag: 2 kg, 8 bags/carton, space demand approx. 0.16 m ³ , 12 carton / pallet
Storage Conditions / Shelf Life	Must be protected against loss of moisture. If stored in closed bags, durability unlimited. Loss of moisture during long storage has no influence on the performance.

Application

Maximum of recommended dosage	3.5 kg/m ³ for concrete acc. DIN EN 206-1/DIN 1045-2: 7 kg/m ³ for sprayed concrete acc. DIN EN 14487/DIN 18551
Addition	SikaAer [®] Solid should be preferably added with the aggregates, in any case before adding the superplasticizer. Mixing time is limited on the required mixing process.
Testing	The presence of SikaAer [®] Solid in concrete can be verified by washing out the hollow microspheres acc. 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 dosage is to be determined in the context of the initial testing. Within the initial testing a CDF-test acc. DIN CEN/TS12390-9, Section 7 must be performed.

Important Advices

Value Base	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.
Health, Safety and Environment Information	Product code BZM 1 For information and advice on the safe handling, storage and disposal of chemical products, users shall 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 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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