

# PRODUCT DATA SHEET

## Sika-Aer® Fine

AIR-ENTRAINING CONCRETE ADMIXTURE



### DESCRIPTION

Sika-Aer® Fine is a liquid admixture with specific air-entraining action for production of concrete with freeze-thaw resistance.

### USES

Sika-Aer® Fine is used for the production of workable concrete and concrete resistant to freeze-thaw cycles in applications such as:

- Motorways, bridges, airports
- Hydraulic structures, dams, barrages
- Mass concrete constructions

### CHARACTERISTICS / ADVANTAGES

Sika-Aer® Fine entrains into the concrete mix a controlled quantity of air in the form of microscopic bubbles, which are evenly distributed and non-communicative. This ability improves the concrete properties to a remarkable extent, both in cases of fresh and hardened concrete:

#### Fresh concrete:

- Considerable workability improvement, even in cases of massive concrete construction which includes crushed and large sized aggregates
- No change in cement setting (start and completion)
- Increases internal cohesion, with simultaneous reduction of bleeding and segregation
- Pump ability improvement

#### Hardened concrete:

- Increased watertightness and freeze-thaw resistance
- Increased durability
- Increased resistance to environmental attacks and de-icing salts

### APPROVALS / CERTIFICATES

Air entraining admixture (Table 5) according to EN 934.02:2009+A1:2012, Declaration of Performance 53384828, and provided with the CE-mark.

### PRODUCT INFORMATION

<b>Chemical base</b>	Aqueous solution of surfactants
<b>Packaging</b>	IBC, 200 kg drums, 20 kg containers. Bulk supply on demand.
<b>Appearance / Colour</b>	Liquid, brown
<b>Shelf life</b>	12 months from date of production
<b>Storage conditions</b>	Store properly in undamaged, unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.
<b>Density</b>	~ 1.00 kg/l (at +20°C)

pH-Value	9.4 – 11.4 (at +20°C)
Total Chloride Ion Content	Free (EN 934.01)

## TECHNICAL INFORMATION

<b>Concreting Guidance</b>	The standard rules of good concreting practice, concerning production and placing are to be followed. Refer to relevant standards. Fresh concrete must be cured properly and as early as possible.
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## APPLICATION INFORMATION

<b>Recommended Dosage</b>	0.2 – 0.8% by weight of cement
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<b>Compatibility</b>	<p>Sika-Aer® Fine may be combined with the following Sika products:</p> <ul style="list-style-type: none"> <li>- Sika® Plastiment® series</li> <li>- Sikament® series</li> <li>- Sika® ViscoCrete® series</li> <li>- SikaRapid®-2</li> <li>- Sika®-1+ / Sika® WT-200 P</li> <li>- Sika® Ferrogard®-901 S</li> <li>- Sika® Visco I-100</li> <li>- Sikafume® HR-E / Sikacrete® AR</li> <li>- Sika® Antifreeze</li> </ul> <p>Pre-trials are always recommended for these high performance concrete mix designs to confirm the desired application and performance characteristics, e.t.c.</p>
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<b>Dispensing</b>	Sika-Aer® Fine is mixed with the gauging water into the concrete mixer or the fresh concrete at end of the mixing.
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<b>Restrictions</b>	<ul style="list-style-type: none"> <li>▪ When using Sika-Aer® Fine, a suitable mix design has been taken into account and local material sources should be trialled.</li> <li>▪ Sika-Aer® Fine should not be added to dry cement.</li> <li>▪ Sika-Aer® Fine should be added with the mixing water or incorporated to the mix at the end of the mixing process.</li> <li>▪ The exact dosage of Sika-Aer® Fine is determined according to the air percentage required in the mix.</li> <li>▪ The percentage of air entrained into concrete may vary as a function of many factors, such as: <ul style="list-style-type: none"> <li>- aggregate particle size distribution and aggregate size</li> <li>- type and fineness of cement used</li> <li>- percentage of cement into the mix</li> <li>- concrete mixing, method and transportation</li> <li>- environmental conditions</li> <li>- W / C ratio used in the mix</li> </ul> </li> <li>▪ Due to the aforementioned factors, it is absolutely necessary to monitor frequently and consistently the quantity of entrained air in the mix and adjust when necessary the dosage of Sika-Aer® Fine into the mix.</li> <li>▪ Incretion of air quantity in the mix has in general negative results in concrete strengths, which however can be compensated with the use of Sika® Plastiment® / Sikament® / Sika® ViscoCrete® superplasticizers.</li> <li>▪ Before application, suitability tests must be performed.</li> </ul>
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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. 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## 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.

## 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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