

Sika[®] AER

Air entraining admixture for concrete

Positioning

Description

Sika air entraining admixtures have been designed and formulated to deliberately introduce air into concrete in the form of evenly sized and uniformly distributed micro bubbles.

Uses

The use of Sika air entraining admixtures significantly improves the workability and durability of concrete. The cohesion is also increased, thus reducing the risk of segregation, and bleed water movement is reduced.

It is recommended that the use of air entraining admixtures be considered for concrete in applications such as:

- Most forms of low to medium strength concrete.
- Dams, reservoirs.
- Airport runways, hardstands.
- Roading, pavements, footpaths, driveways.
- Slabs and walls.
- Most forms of structural concrete.

Advantages

Sika AER provides the following beneficial effects to concrete:

- Air entrainment considerably reduces the effect of freeze/thaw cycles caused by frost.
- Improved durability of concrete exposed to tidal movements.
- Improves the workability and reduces bleeding of mixes with harsh sands and aggregates - advantage of increased workability can be taken to reduce mixing water without reducing handling properties.
- Easier and quicker mixing of concrete in agitator trucks.
- Concrete in transit and placement is more cohesive and will segregate less.
- Concrete becomes easier to place, resulting in less vibration and work effort to achieve proper compaction.

Tests

Approvals/Standards

Sika AER: Complies with ASTM C260-77, BS 5075 - Part 2 : 1982.

Product Data

Form:

Water soluble liquid based on a synthetic chemical blend.

Packaging:

20 litre and 200 litre non returnable drums, and bulk delivery.

Storage & Shelf Life:

1 year in unopened, original containers when stored free from frost and below 25°C.

Technical Data

Colour:

Dark Brown

Specific gravity:

1.01 kg/litre approx.

Chloride content:

Nil

Effect on setting:

None

Freezing point:

- 5°C

Suitability:

All types of Portland cement, including sulphate resistant cements.

TEA content:

Sika AER does not contain triethanolamine (TEA).

Compatibility with other

Sika admixtures:

Yes - after consultation with Sika Technical Dept.

Dosage (typical):

30-150 mls/m³ of concrete

Exact dosage rates are determined by air meter tests on trial mixes.

Application Conditions

Instructions for use

- Sika AER is added directly into the mixing water prior to addition to the aggregates. Do not add to the dry cement or aggregates.
- Regular weekly tests on the entrained air content should be undertaken with an air meter. If necessary the dosage may need to be adjusted to keep the entrained air content within the required limits.

Construction



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| Important Notes | <ul style="list-style-type: none"> • Increased air contents generally have a detrimental effect on the strengths of concrete. Limits for air content in air-entrained concrete are given in NZ3104. • Dosage rates given are indicative only. Exact dosages are determined by air meter tests on trial mixes. • Factors affecting air entrainment include: <ul style="list-style-type: none"> • Type and fineness of cement • Concrete with a medium to high cement content • Type of sands and aggregates used • Grading and proportion of sand • Cement content • Total free water content • Temperature • Other admixtures • As with all concrete and mortars, it is essential to protect mixes containing AER from water evaporation during the crucial early age curing period. We recommend the use of Antisol curing membranes for this purpose. Refer to Antisol data sheet for further information. • When used in conjunction with set accelerators the air entraining dosage may need to be increased. Please contact Sika (NZ) Ltd Technical Service department. |
| Notes | <p>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.</p> |
| Local Restrictions | <p>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.</p> |
| Safety Instructions Protective Measures | <ul style="list-style-type: none"> • To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work. • Local regulations as well as health and safety advice on packaging labels must be observed. • For further information refer to the Sika Material Safety Data Sheet which is available on request. • If in doubt always follow the directions given on the pack or label. |
| Important Notes | <ul style="list-style-type: none"> • Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities. • Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet. |
| Legal Notes | <p>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.</p> |



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