

# PRODUCT DATA SHEET

## Sika® AER NG

### Air entraining admixture for concrete

#### 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
- walls.

#### FEATURES

##### Durability:

- Air entrainment is recognized as the most effective prevention against concrete scaling in exposed environments.
- Air entrained concrete delivers particular benefits in the form of increased concrete durability. This is important in colder climates where frost and freeze-thaw cycles can cause scaling and damage to the concrete surface.
- Air entraining agents help to prevent scaling by creating microscopic air voids that water trapped in the concrete can expand

into when the concrete freezes, thus preventing cracks caused by the natural expansion. Entrained air voids in the concrete will

also increase durability in harsh environments where concrete is exposed to deicing salts, marine salts and sulfates.

##### Workability and Placeability:

Workability and placeability are also improved by the lubricating action of the microscopic bubbles in the concrete. Concrete flows better, and bleeding and shrinkage is reduced because less water is needed to obtain the desired workability. Sika AER NG provides stable and predictable air contents in concrete, with uniform air bubble spacing throughout the concrete matrix

## PRODUCT INFORMATION

Packaging	1000 Litres IBC
Colour	Colourless
Shelf life	12 months minimum from production date.
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between 5 oC and 35 oC. Protect from direct sunlight.
Density	1+/- 0.01
pH-Value	6 +/-1
Recommended dosage	Dosage rates will vary depending on the air content required for a particular project. Typically air contents will be specified in the range of 4 to 8 percent by volume. Other factors that may affect the amount of air entrained into the concrete include, but are not limited to total cementitious content, type of pozzolanic materials, sand gradation, ambient & concrete temperature and water content. Sika recommends that trial mixes be tested whenever material or any other changes are made that may affect the amount of entrained air. Dosage rates for Sika AER-NG will typically fall between 0.5 and 1.5 fl. oz./100 lbs. (32 - 97 ml/100 kg) of cementitious to entrain between 4 and 6 percent air. Higher air contents may be obtained by increasing the dosage rate. Combination with other admixtures, particularly water reducers and retarders, may effect the air content in the mix. Air contents should be checked with an air-meter after batching and dosage adjustments made at the concrete plant.

## 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

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.

### MIXING

Measure the required quantity per batch manually or with automatic dispenser equipment. Add Sika AER-NG to mixing water or sand. Do not mix with dry cement. When used in combination with other admixtures, care must be taken to dispense each admixture separately into the mix.

#### Combination with Other Admixtures:

Combination with other admixtures may effect the amount of entrained air in the mix. Air contents should be checked with an airmeter after batching and dosage adjustments made at the concrete plant.

## APPLICATION

Sika AER-NG is designed for usage in exterior concrete such as highway paving, curb and gutters, sidewalks, driveways, slabs, walls or other areas needing protection from freeze-thaw damage or the harmful effect of deicing salts.

Sika AER-NG is recommended for applications with a short mix cycle and time to placement, or where the usage of a neutralized vinsol resin admixture is expressly stipulated. Sika AER-NG can also be successfully used where harsh mixes are used or fly-ash is added to the mix. Sika AER-NG is an effective and economical tool to improve the paste quality of lean concrete mixes and reduce risk of concrete segregation and bleeding.

## 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 war-

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ranty 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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