BUILDING TRUST

PRODUCT DATA SHEET

SikaControl®-310 AER T

(formerly MasterAir® 310T)

Air-entraining admixture

DESCRIPTION

SikaControl®-310 AER T air-entraining admixture is for use in concrete mixtures. It meets the requirements of ASTM C 260, AASHTO M154 and CRD-C 13. Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing, and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. SikaControl®-310 AER T admixture can be used to obtain adequate freeze-thaw durability in a properly proportioned concrete mixture if standard industry practices are followed.

USES

- Low slump concrete
- Flowable concrete
- High temperature concrete
- Concrete with extended working times
- Lightweight and prestressed concrete
- For imparting workability to lean harsh mixes
- To reduced bleeding caused by grading deficiencies in the concrete materials
- Increasing the entrained air content of concrete with air entraining Portland cements

CHARACTERISTICS / ADVANTAGES

- Ready-to-use in the proper concentration for rapid, accurate dispensing
- Improved resistance to damage from cyclic freezing and thawing
- Improved resistance to scaling from deicing salts
- Improved plasticity and workability
- Reduced permeability – increased watertightness
- Reduced segregation and bleeding
- Ultimate strength than plain concrete when used within the recommended dosage range

PRODUCT INFORMATION

Product Declaration	Corrosivity – Non-Chloride, Non-Corrosive: SikaControl®-310 AER T admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.
Packaging	▪ 1000 L IBC tank ▪ Bulk delivery
Shelf Life	12 months from date of production
Storage Conditions	Store at a temperature above 5 °C and in tightly sealed original containers. If found to be frozen, thaw it and reconstitute by stirring.

APPLICATION INFORMATION

Recommended Dosage

There is no standard dosage for SikaControl®-310 AER T admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete-making materials and ambient conditions. Typical factors that might influence the amount of air entrained include temperature, cementitious materials, sand gradation, sand and aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique. The amount of SikaControl®-310 AER T admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 50–400 ml / 100 kg of cementitious material. Measure the air content of the trial mixture, and, if needed, either increase or decrease the quantity of SikaControl®-310 AER T admixture to obtain the desired air content. In mixtures containing water-reducing or set-control admixtures, the amount of SikaControl®-310 AER T admixture needed may be somewhat less than the amount required in plain concrete.
Due to possible changes in the factors that can affect the dosage of SikaControl®-310 AER T admixture, frequent air content checks should be made during the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement. If an unusually high or low dosage of SikaControl®-310 AER T admixture is required to obtain the desired air content, consult your local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

SYSTEM INFORMATION

Compatibility

SikaControl®-310 AER T admixture may be used in combination with any Sika admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

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.

IMPORTANT CONSIDERATIONS

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions of water to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

DISPENSING

Add SikaControl®-310 AER T admixture to the concrete mixture using a dispenser designed for air-entraining admixtures or add manually using a suitable measuring device that ensures accuracy within plus or minus 3 % of the required amount.
For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate. If the concrete mixture contains fine lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

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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