

Sikacrete®-AR

Concrete additive with pozzolanic components for high performance concrete

Construction

Product Description

Sikacrete®-AR is an additive in the form of a powder for producing concrete with very high mechanical performances and very high resistance to chemical and weather attacks.

Uses

- For production of concrete with very high density, resistance and mechanical properties (> 60Mpa)
- For concrete with very high compression strength for precast elements, e.g. beams, viaducts, bridges
- For production of waterproof concrete for hydraulic structures such as tanks, pipelines, gallery floors etc.
- Industrial floors with heavy loadings
- For production of injection mortars in prestressed structures, anchoring, strengthening
- Buildings in marine areas, buildings in industrial areas
- For production of concrete with high resistance to chemical, mechanical and carbonation attacks

Characteristics / Advantages

Sikacrete®-AR offers the following advantages to concrete:

- Reduced water permeability
- Increased chemical resistance
- Very high resistance to carbonation and gas permeability
- Increased mechanical strengths, which can be > 80Mpa (depending on the mix, the cement quantity and the aggregate nature)
- Does not contain chloride or any other type of substances that might attack reinforcement. Therefore Sikacrete®-AR can be used in reinforced and prestressed concrete

Product Data

Form

Appearance / Colours Fine powder, grey.

Packaging 20 kg sacks

Storage

Storage Conditions / Shelf Life 12 months from date of production if stored in original, sealed packaging protected from direct sunlight, moisture and frost.



Technical Data

Chemical Base Combination of H.R.W.R. polymers and hydraulic latent additives

System Information

Application Details

Consumption / Dosage 5 - 10% by weight of cement

Application Conditions / Limitations

Compatibility Sikacrete®-AR can be combined with the following Sika products:

- Sikament® / SikaPlast® superplasticizers
- Sika® ViscoCrete® superplasticizers
- SikaRapid® -2
- Sika® Ferrogard®-901
- Sika® Visco I-100
- Sika-Aer® Fine
- Sika® Antifreeze

Trials are recommended before combining products.

Application Instructions

Dispensing Sikacrete®-AR is added to the dry aggregate and cement mix in the production unit, before water addition. Recommended mixing time of dry mix is 30 sec/m³ of concrete prior to water addition. After water addition the mixing time is at least 90 sec/m³ of concrete.

For calculation of the proper water amount, the dosage of Sikacrete®-AR, the dosage of the superplasticizer and the final demanded concrete properties have to be taken into account.

In all cases before application, suitability tests must be performed.

Application Method / Tools The standard rules of good concreting practice, concerning production as well as placing, are to be followed. Refer to relevant standards. Fresh concrete must be cured properly.

Notes on Application / Limitations When using Sikacrete®-AR a suitable mix design must be taken into account and local material sources should be tested.

For very high resistance concrete, use at least 300kg of cement and keep the W/C ratio ≤ 0.40 . Fresh concrete must be protected for at least 72 hours.

In order to adjust the workability to the desired level, use superplasticizer from Sikament®/ Sika® ViscoCrete® series.

Before application suitability tests must be performed.

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.

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.

Health and Safety Information 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.



Sika Hellas ABEE
15 Protomagias Str.
GR 145 68 Kryoneri
Athens-Greece

Phone +30 210 8160600-5
Fax +30 210 8160606
Email: sika@gr.sika.com
www.sika.gr

