

Sika ViscoCrete[®] SC 405

Superplasticiser for Sprayed concrete

Construction

Description

Sika ViscoCrete[®] SC 405 is a customised third generation polycarboxylate polymer admixture for shotcrete applications. The polymer significantly reduces water with improved slump life of the mix. Developed using nano technology, the specific polymer with a long molecular chain and attached side chains effectively disperse cement particles and through steric hindrance preserve slump life for long periods without retardation, while giving excellent hydration control.

Advantages

- Flowable concrete with low water cement ratios.
- Maintain slump life with no retardation even at high temperatures.
- Increased early and ultimate strengths.
- Eliminates retempering the mix with additional admixture, (up to 4 hours).
- Lower mix temperatures are experienced in comparison to naphthalene dosed mixes.
- Mix compatibility with a far greater range of cement types, pozzolans, fibers and other materials.
- Higher water reduction, in a range of 30 – 40 percent, hence optimizing cementitious materials.

Storage and Shelf Life

Stored at temperatures between 5°C and 35°C in unopened original containers protected from direct sunlight and frost, shelf life is at least one (1) year.

Dosage

The recommended dosage rate will vary between 400 – 1600 mls/ 100 kgs of cementitious material. Contact your local Sika Representative on special mixes.

Mixing

Optimal concrete plasticising effect (maximum water reduction) is obtained if Sika ViscoCrete[®] SC 405 is introduced into concrete after the cement is wet out. Thorough mixing is essential to achieve the admixtures maximum dispersion effect.

Performance Characteristics:

Shotcrete mix design:

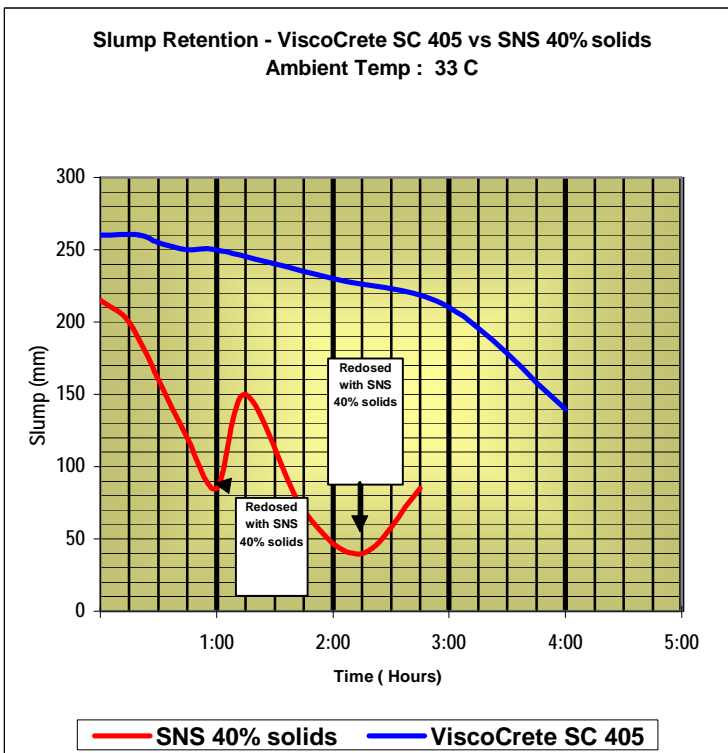
440 Kg/m³ cement
 20 Kg/m³ Silica Fume
 180 L/m³ water

SNS 40% solids @ 525
 mls/100 Kgs of binder

ViscoCrete[®] SC 405 @ 700
 mls/100kgs of binder

Both mixes are stabilized with SikaTard 930 @ 1.1% by weight of binder

Slump Retention - ViscoCrete SC 405 vs SNS 40% solids
 Ambient Temp : 33 C



Technical Data (Typical)

Form	Modified co-polymer
Colour	Brown
Density (20°C)	1.09 kg/litre approx.
pH Value (20°C)	4.0 ± 1.0
Chloride Content	No added chlorides
TEA Content	Does not contain triethanolamine
Air Entrainment	ViscoCrete® SC 405 is intentionally designed to entrain ample air in the mixes to counter bleed and promote improved pumping and spraying action.
Important Notes:	Do not use ViscoCrete® SC 405 admixture with admixtures containing beta-naphthalene-sulphonate such as Sikament NN. Erratic slump loss and pumpability may be experienced. Contact your local Sika representative for further guidance.
Packaging	20 litre pail 205 litre drum Bulk deliveries
Handling Precautions	Eyes – rinse thoroughly with water for at least 15 minutes. Consult a physician. Skin – wash skin thoroughly with soap and water. Remove contaminated clothing. If symptoms persist, consult a physician. Ingestion – Induce vomiting, get medical attention immediately. Inhalation – remove person to fresh air; if breathing has stopped, institute artificial respiration.
Spill Clean Up	Wear suitable protective equipment. Contain spill, collect with absorbent material and transfer into suitable containers. Avoid contact. Keep spills away from sewers and open bodies of water. Dispose of in accordance with local, state and federal environmental regulations. If dried, this material is an oxidizer and is classified as an ignitable waste.
Important Notification	The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request. PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

