



PRODUCT DATA SHEET

SikaPlast®-500

MID-RANGE, WATER-REDUCING ADMIXTURE FOR CONCRETE

PRODUCT DESCRIPTION

SikaPlast®-500 is a lignin-based mid range water reducing admixture. SikaPlast®-500 meets the requirements of ASTM C494/AASHTO M 194, Type A & F.

WHERE TO USE

- SikaPlast®-500 can be used in all types of conventional ready mix concrete applications and is effective in concrete containing Portland Limestone Cement and supplementary cementitious materials. SikaPlast®-500 is specifically suitable in following applications:
- Concrete slabs
- Concrete footings
- Concrete paving
- Harsh mix designs with low cement content

CHARACTERISTICS / ADVANTAGES

Mid Range Water Reducing Applications: Mid range application will be beneficial especially in ready mix applications. At a medium dosage, SikaPlast®-500 can be used as a cost effective mid range water reducing admixture or simply as a water reducing admixture for production of conventional slump concrete. When used as a mid range water reducing admixture, water reduction up to 12 % can be obtained.

Various levels of water reduction can be achieved by adjusting the dosage rate of SikaPlast®-500. At higher dosage rates increased water reduction up to 20% can be achieved making it suitable for some high range water reducing applications. The plasticizing action of SikaPlast®-500 allows for the production of flowable concrete with moderate workability and slump retention that can typically be placed with minimal vibration even

at a low water/cementitious ratio.

At lower dosages rates SikaPlast®-500 is an effective normal water reducing admixture. This application is ideal for use with lean, harsh concrete mixes or concrete containing supplementary cementitious materials.

High Range Water Reducing Applications: When used as a high range water reducing admixture, water reduction up to 20 % can be obtained. The plasticizing action of SikaPlast®-500 allows for the production of flowable concrete with moderate workability and slump retention that can typically be placed with minimal vibration even at a low water/cementitious ratio.

The combined water reducing and superplasticizing action in all three cases provide the following benefits:

- Higher early and ultimate strengths.
- Reduced water cement ratios produce more durable dense concrete.
- Increased slump and workability improves efficiency of labor and reduces labor costs.
- Reduced water/cementitious ratio reduces permeability and increases durability.
- Improved finishing characteristics.
- Increased strengths allow faster structural use of concrete.

SikaPlast®-500 does not contain any intentionally added calcium chlorides.

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations

APPROVALS / CERTIFICATES

SikaPlast®-500 is designed to meet the requirements of ASTM C494 Types A and F.

- Approved by the Ontario Ministry of Transportation.
- Approved by the Ministère des Transports du Québec.

PRODUCT INFORMATION

CSC MasterFormat®	03 05 00
Packaging	205 L (54 US gal.) drum 1040 L (275 US gal.) IBC Bulk delivery
Shelf Life	1 year when stored in dry warehouse conditions at temperatures between 5 °C and 27 °C (40 °F and 80 °F).
Storage Conditions	Store at temperatures above 5 °C (40 °F). If frozen, thaw and agitate thoroughly to return to normal state. Protect from direct sunlight.
Appearance / Colour	Liquid / Dark Brown
Specific Gravity	Approx. 1.16

APPLICATION INFORMATION

Recommended Dosage	<p>For general concreting applications, recommended dosage rate is 195-780 mL/100 kg (3-12 fl.oz /100 lb) of cement. Dosage rates will vary depending on the material used, ambient conditions and the requirements of a specific project.</p> <p>Where maximum water-reduction is required, dosage of up to 1170 mL per 100 kg (18 fl.oz/100 lb) of cementitious material may be used. In this case, delayed setting times will likely occur. Dosage rates outside the recommended range may be used where specialized materials such as microsilica are specified, extreme ambient conditions are encountered or unusual project conditions require special consideration. In these cases, contact your Sika Canada Technical Sales Representative for further information.</p>
Mixing	<p>For best plasticizing results, SikaPlast®-500 should be added directly to freshly mixed concrete in the concrete mixer at the end of the batching cycle. SikaPlast®-500 may also be dispensed as an integral material during the regular admixture batching cycle, or into freshly mixed concrete in a ready-mix truck at the concrete plant or job site. To optimize the superplasticizing effect, Sika recommends that the combined materials be mixed for 80–100 revolutions, either in the concrete mixer or in the ready-mix truck.</p> <p>Combination with other admixtures: SikaPlast®-500 is highly effective as a single admixture or in combination with other admixtures. Contact your local Sika Sales Representative for further information.</p> <p>Combination with pozzolanic materials: SikaPlast®-500 can be successfully used in mix designs utilizing pozzolanic materials such as fly ash and GGBFS</p>

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including

environment, preparation, application, curing and test methods.

Properties tested at 23 °C (73 °F) and 50 % R.H. unless stated otherwise.

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ENVIRONMENT, HEALTH & 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.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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