

PRODUCT DATA SHEET

SikaPlast® S-1

Water reducing and retarding super plasticizing admixture for concrete

DESCRIPTION

SikaPlast® S-1 is a polycarboxylate based super-plasticizer developed particularly for use in ready mixed concrete to give sufficient slump retention and high strength development of normal grade concrete mixes.
Suitable for use in hot and tropical climatic conditions.

USES

- Ready mixed concrete
- Slabs
- Foundations
- Walls
- Columns and piers
- Piles
- Pre-stressed concrete

CHARACTERISTICS / ADVANTAGES

SikaPlast® S-1 acts by surface absorption on the cement particles producing steric hindrance as well as electrostatic repulsion between cement particles which results in higher dispersion, flow and retention providing the following beneficial properties:

- Substantial improvement in workability without increased water
- Low risk of segregation
- Normal set without retardation (within the dosage limit)
- Improved density and surface finish
- Improved water tightness
- Does not contain chlorides or other steel corrosion promoting ingredients therefore may be used for reinforced and pre-stressed concrete construction

APPROVALS / CERTIFICATES

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	Bulk supply
Appearance / Color	Amber liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost.
Density	~1.03 kg/l ± 0.015 (+25 °C)
Total chloride ion content	Nil

TECHNICAL INFORMATION

Concreting guidance

the standard rules of good concreting practice for production and placing must be observed when using SikaPlast® S-1 in concrete. Refer to relevant standards.

APPLICATION INFORMATION

Recommended dosage

0.5 – 1.7 % by weight of cement

Compatibility

SikaPlast®S-1 may be combined with all types of Portland cement (OPC and SRC), concretes containing pozzolanic materials such as GGBS, PFA, micro-silica. Not compatible with admixtures based on sulfonated naphthalene or melamine.

Dispensing

SikaPlast®S-1 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant.
Do not add SikaPlast®S-1 directly to the dry mix.
For optimum utilization of its high-water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

IMPORTANT CONSIDERATIONS

When using SikaPlast®S-1 a mix design must be selected for the local material sources used and trial mixes performed to verify suitability. If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing. SikaPlast®S-1 should not be added to dry cement. Before pouring, suitability tests on the fresh concrete must be carried out. In case the setting time of concrete is extended, if cured properly, other properties may not be affected, and higher ultimate strength is visualized. SikaPlast® products are not compatible with admixtures based on sulfonated naphthalene or melamine.

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.

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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.

LOCAL RESTRICTIONS

Note that because 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 the 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 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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