BUILDING TRUST

PRODUCT DATA SHEET

SikaPlast®-400 PK

High Range Superplasticizing Water Reducing And Retarding Concrete Admixture

DESCRIPTION

SikaPlast®-400 PK is a polycarboxylate based super-plasticizer developed particularly for use in ready mixed concrete to give extended slump retention and high strength development of normal grade concrete mixes. SikaPlast®-400 PK is suitable for use in concrete mixes incorporating pozzolanic materials such as GGBS, PFA and microsilica. Suitable for use in hot and tropical climatic conditions.

USES

- Ready mixed concrete
- High flow concret
- High strength concrete
- Slabs
- Foundations
- Walls
- Columns and piers
- Piles
- Pre-stressed concrete
- Bridges and cantilever structures

CHARACTERISTICS / ADVANTAGES

SikaPlast®-400 PK acts by surface absorption on the cement particles producing steric hindrance as well as electrostatic repulsion between the binder particles which results in higher dispersion, flow and retention. SikaPlast®-400 PK provides 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
- Excellent solution for continuous concrete casting of deep elements
- Does not contain chlorides or other steel corrosion promoting ingredients

APPROVALS / STANDARDS

SikaPlast®-400 PK follows the requirements of ASTM C494; Types G and EN 934-2

PRODUCT INFORMATION

Chemical Base	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	05 ltr jerry can 20 ltr plastic can 200 ltr drum 1000 ltr IBC Bulk supply in tanker is possible on demand
Appearance / Colour	Brown 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.
pH-Value	≥ 4
Total Chloride Ion Content	Nil (EN 934-2)
Specific gravity	1.04 ± 0.02

TECHNICAL INFORMATION

Concreting Guidance	The standard rules of good concreting practice for production and placing must be observed when using SikaPlast®-400 PK in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika® Antisol® products as a curing agent or apply wet hessian.

APPLICATION INFORMATION

Recommended Dosage	Dosage 0.8 - 1.6 % by weight of binder Higher dosages, up to 2 %, by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	SikaPlast®-400 PK may be combined with all types of Portland cement (OPC and SRC), concretes containing pozzolanic materials such as; GGBS, PFA, micro-silica and the following Sika products: SikaPump®, Sika® FerroGard®-901, SikaFume®, SikaFiber®, Sika Aer®, Sika® Stabilizer, Sika®-1 WT, Sika® WT-10 We recommend to perform trial mixes to establish the required performance when combining SikaPlast®-400 with the above products or other admixtures. Please consult our Sika Technical Department.
Dispensing	SikaPlast®-400 PK is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add SikaPlast®-400 PK 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.

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.

LIMITATIONS

When using SikaPlast®-400 PK 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®-400 PK should not be added to dry cement. Before pouring, suitability tests on the fresh concrete must be carried out. Due to the extended workability take special care that formwork is properly installed and secured. 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

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.

CLEANING OF TOOLS

Clean all equipment and tools with water immediately after use.

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

Sika Pakistan (Pvt.) Limited
141-CCA Phase IV, DHA
Lahore Punjab 54792
Pakistan
phone: +92 42 3569 4266 - 67
fax: +92 42 3569 4268
http://pak.sika.com/

Sika Pakistan (Pvt.) Limited
141-CCA Phase IV, DHA
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