

PRODUCT DATA SHEET

Sika® Plastiment® PR-450 SA

WATER-REDUCING AND RETARDING CONCRETE ADMIXTURE

DESCRIPTION

Sika® Plastiment® PR-450 SA (formerly named Sika® Plastiment® PR-450*) is a highly effective water reducing agent with controlled retardation over a wide dosage range.
Suitable for use in tropical and hot climatic conditions.

USES

Sika® Plastiment® PR-450 SA is used for producing high quality concrete in applications such as:

- Ready mixed concrete
- Fair faced concrete
- High temperature concreting
- Difficult placing conditions
- Long transportation distances

CHARACTERISTICS / ADVANTAGES

Sika® Plastiment® PR-450 SA provides the following properties:

- Long slump retention at high concrete temperature
- Increased setting time in hot weather
- Reduced water without loss of workability
- Increased strength
- Reduced shrinkage and creep
- Better surface finish
- Economic

APPROVALS / CERTIFICATES

Sika® Plastiment® PR-450 SA follows the requirements of ASTM C494; Types B & D and EN 934-2

PRODUCT INFORMATION

Composition	Blend of organic polymer and inorganic additives
Packaging	200 L drum 1000 L flowbin Bulk supply in tanker trucks possible on request
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.
Density	~1.10 kg/l (+25 °C)
Total Chloride Ion Content	Nil (EN 934-2)

TECHNICAL INFORMATION

Concreting Guidance

The standard rules of good concreting practice for production and placing must be observed when using Sika® Plastiment® PR-450 SA 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

0.3 - 1.2 % by weight of binder
Higher dosages 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

Sika® Plastiment® PR-450 SA 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: Sikament® and Plastiment® ranges; SikaPump®, Sika® FerroGard®-901, SikaFume®, SikaFiber®, Sika Aer®, Sika® Stabilizer, Sika®-1 WT, Sika® WT-10
We recommend performing trial mixes to establish the required performance when combining Sika® Plastiment® PR-450 SA with the above products or other admixtures. Please consult our Sika Technical Department.

Dispensing

Sika® Plastiment® PR-450 SA is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add Sika® Plastiment® PR-450 SA directly to the dry mix. For optimum utilization we recommend thorough mixing at a minimum 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

Before pouring suitability tests on the fresh concrete must be carried out.

Take special care that formwork is properly installed and secured.

If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing.

When using Sika® Plastiment® PR-450 SA a suitable concrete mix must be designed for the local material sources and should be trialed.

When accidental overdosing occurs the set retarding effect and workability increases. Additional air may also be entrained.

During this period the concrete must be kept moist in order to prevent premature drying out.

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 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 the exact product data and uses.

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.

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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ISO 9001: Sika UAE LLC,
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ISO 14001: Sika UAE LLC,
Sika Gulf B.S.C. (c),
Sika Saudi Arabia Co. Ltd
OHSAS: Sika UAE LLC,
Sika Gulf B.S.C. (c)

All products are supplied
under a management
system certified to conform
to the requirements of the
quality, environmental and
occupational health &
safety standards ISO 9001,
ISO 14001 and OHSAS
18001.

Product Data Sheet

Sika® Plastiment® PR-450 SA
February 2018, Version 01.01
021303011000000739

SikaPlastimentPR-450SA-en-AE-(02-2018)-1-1.pdf

