

PRODUCT DATA SHEET

SikaPlast[®]-440

Workability enhancing, plasticising admixture

DESCRIPTION

SikaPlast[®]-440 is a multi-purpose water reducer and plasticizer, utilizing technology unique to the **SikaPlast[®]-400 Series** range of products. A range of Ready Mixed concrete plasticisers, specifically designed to produce soft concrete rheology with enhanced workability retention and improved wet concrete cohesion.

USES

SikaPlast[®]-440 may be used in both ready mix and on site batching applications:

- As a plant added high range water reducer (High dosage range), to provide excellent plasticity, while maintaining slump for ~120 minutes with minimal retardation.
- As a plant added mid range water reducer (Medium dosage range), for pumped concrete flatwork and applications where superior finishing characteristics are required with low retardation levels.

SikaPlast[®]-440 is ideal for use with lean, harsh concrete mixes, and concrete containing, slag or fly ash.

CHARACTERISTICS / ADVANTAGES

Water Reduction: SikaPlast[®]-440 can be dosed at low to medium quantities to obtain water reduction from 5-18% and will achieve water reduction up to 22% at high dosage rates.

Extended Slump Life and Set Control: SikaPlast[®]-440 has been formulated to provide controlled and predictable extended slump life for periods of 90 to 120 minutes (depending on dosage) allowing good slump retention without significant loss in early strength development.

The combined high range water reduction and plasticising action of SikaPlast[®]-440 provides the following benefits in hardened concrete:

- Higher early compressive strengths for earlier removal of forms and structural use of concrete.
- Higher ultimate strengths allow for greater engineering design flexibility and structural economies.
- Reduced water cement ratios produce more durable, dense concrete with reduced permeability.
- Highly effective plasticiser reduces surface defects in concrete elements and improves aesthetics appearance.

SikaPlast[®]-440 does not contain formaldehyde, calcium chloride or any other added chlorides and will not initiate or promote the corrosion of steel present in the concrete.

PRODUCT INFORMATION

Chemical Base	Aqueous solution of modified polycarboxylates.
Packaging	200 and 1000 Litre containers
Appearance / Colour	Brown liquid
Shelf Life	12 months from date of production
Storage Conditions	Store properly in undamaged unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +25°C. Protect from direct sunlight and frost.
Density	1,11 kg/litre
pH-Value	7.0 +/- 0.5

TECHNICAL INFORMATION

Concreting Guidance	The standard rules of good concreting practice concerning production and placing are to be followed. Fresh concrete must be cured properly and as early as possible.
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APPLICATION INFORMATION

Recommended Dosage	Dosage rates will vary according to materials used, ambient conditions and the requirements of a specific project. Full dosage range: 0.4 – 1.4% by weight of cementitious (400 - 1400 ml/100kg cementitious) Typical dosage range: 0.7 - 1.2 % by weight of cementitious (700 - 1200 ml/100kg cementitious)
Dispensing	SikaPlast®-440 is added to the gauging water or simultaneously with it poured into the concrete mixer. For optimum utilisation of the high water reduction, 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 2/3 of wet mixing time, to avoid surplus water in the concrete. SikaPlast®-440 can also be added directly to the freshly mixed concrete in the concrete mixer at the end of the batching cycle. Frozen SikaPlast®-440 Frozen SikaPlast®-440 may be used after it has been slowly thawed at room temperature and intensively mixed. Combinations with other admixtures SikaPlast®-440 is highly effective as single admixture or in combination with many admixtures in the Sika System. Field evaluations are needed to determine, based on local materials, the proper dosage of any combination of admixture used. Please contact your local Sika representative for more information and assistance. Combinations with cement extenders SikaPlast®-440 is particularly well suited for use with slag and fly ash because of its water reduction capability with superior slump control and early strength development.

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.

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.

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 Material Safety Data Sheet 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. 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.

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Product Data Sheet

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