

PRODUCT DATA SHEET

Sikament[®]-520

High Range Water Reducing and Set Retarding Concrete Admixture



DESCRIPTION

Sikament[®]-520 is a highly effective dual action liquid superplasticiser that imparts excellent slump retention for prolonged periods.

It is used for the production of free flowing concrete or as a substantial water-reducing agent for promoting high early strengths.

Suitable for use in hot and tropical climatic conditions.

USES

Sikament[®]-520 can be used as a superplasticizer for the production of free flowing concrete for:

- Slabs
- Foundations
- Walls
- Columns
- Piers
- Slender components with densely packed reinforcement
- Piles
- Fiber reinforced concrete

Sikament[®]-520 is also used as a water-reducing agent leading to high early strength concrete such as:

- Pre-cast concrete elements
- Pre-stressed concrete
- Bridges and cantilever structures

CHARACTERISTICS / ADVANTAGES

Sikament[®]-520 provides the following properties:

As a superplasticiser:

- Workability is greatly improved
- Concrete is placed easily
- Especially suitable for slender components with densely packed reinforcement Concrete requires less vibrating
- Improved cohesion of the concrete mix significantly reduces the risk of segregation and allows greater time for placement

As a water reducer:

- Impressive water reduction capability
- Final strength improvement

APPROVALS / CERTIFICATES

Sikament[®]-520 shall comply the requirements of the following standards:

- ASTM C 494/C 494M Type D and Type G

PRODUCT INFORMATION

Composition	Sulphonated naphthalene
Packaging	200 Lit PE Drum / 1000 Lit IBC Tank
Appearance / Colour	Light 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.

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Specific gravity	1.19 ± 0.02	
Total chloride ion content	Nil	(EN 480-10)

TECHNICAL INFORMATION

Concreting guidance	<p>The standard rules of good concreting practice for production and placing must be observed when using Sikament®-520 in concrete. Refer to relevant standards.</p> <p>Fresh concrete must be cured properly especially at high temperatures and under windy conditions in order to prevent plastic and drying shrinkage and low concrete strengths. It is highly recommended the use of Sika® Antisol® curing agents.</p>
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APPLICATION INFORMATION

Recommended dosage	<p>0.8 to 2.5% by weight of binder</p> <p>Higher or lower dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. The use of the recommended dosage does not imply that compliance with the standards will be met over the whole range.</p> <p>Trial tests should be carried out with the materials to be used on site to find the dosage necessary to achieve the required result.</p>
Compatibility	<p>Sikament®-520 may be combined with all types of Portland cement (OPC and SRC), and may be used for concretes containing pozzolanic materials such as GGBS, PFA and micro-silica.</p> <p>Sikament®-520 is compatible with the following Sika products:</p> <ul style="list-style-type: none"> ▪ SikaPump® ▪ Sika® FerroGard®-901 ▪ SikaFume® ▪ SikaFiber® ▪ Sika Aer® ▪ Sika® Stabilizer ▪ Sika®-1 WT <p>We recommend to perform trial mixes to establish the required performance when combining Sikament®-520 with the above products or other admixtures. Please consult our Sika Technical Department.</p>
Dispensing	<p>Sikament®-520 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant.</p> <p>Do not add Sikament®-520 directly to the dry mix.</p> <p>For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds.</p> <p>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.</p>

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.

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.

LIMITATIONS

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.
If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing.
When using Sikament®-520 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.

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 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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