

PRODUCT DATA SHEET

SikaPlast[®]-3120 AE

WATER-REDUCING AND RETARDING ADMIXTURE FOR CONCRETE

DESCRIPTION

SikaPlast[®]-3120 AE is a polycarboxylate based super-plasticizer developed particularly for use in ready mixed concrete to give extended slump retention and high strength development of high specification grade concrete mixes.

SikaPlast[®]-3120 AE 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

SikaPlast[®]-3120 AE is mainly used for the following applications:

- Production of site mixed and ready-mix concrete
- High performance / high strength concrete
- Concrete with low water binder ratio
- Concrete placing in congested steel reinforcement
- Depending on dosage rate used; high flow and self compacting concrete (SCC)
- Concrete requiring retained workability
- During hot weather production of concrete with extended transportation or placing times
- Slim elements requiring a high standard of surface finish

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	1000 L flowbin. Bulk supply in tanker trucks possible on request
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 +50 °C. Mix well before using.
Appearance and colour	Brown liquid
Density	~1.08 kg/l (+25 °C)

FEATURES

SikaPlast[®]-3120 AE acts by surface adsorption on the cement particles producing steric hindrance and electrostatic repulsion between cement particles which results in higher dispersion, flow and retention. SikaPlast[®]-3120 AE provides the following beneficial properties:

- Production of workable concrete at low w/b ratio
- Improved shrinkage and creep characteristics
- Enhanced rheology and robustness to the concrete
- Improved flowability resulting in minimal placing and compacting efforts
- Slower rate of carbonation ingress
- Higher ultimate strengths allows greater flexibility for engineers to design
- Reduced surface defects so improving aesthetic appearance
- Durable concrete
- Does not contain chlorides or other steel corrosion promoting ingredients

CERTIFICATES AND TEST REPORTS

SikaPlast[®]-3120 AE follows the requirements of ASTM C494; Type G and EN 934-2

TECHNICAL INFORMATION

Concreting guidance	<p>The standard rules of good concreting practice for production and placing must be observed when using SikaPlast®-3120 AE in concrete. Refer to relevant standards.</p> <p>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.</p>
----------------------------	--

APPLICATION INFORMATION

Recommended dosage	<p>0.5–2 % by weight of binder</p> <p>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.</p>
Dispensing	<p>SikaPlast®-3120 AE is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if SikaPlast®-3120 AE is poured into the concrete mix right after the addition of the first 80 % of the mixing water, i.e. when all solids are wetted. Avoid adding the admixture to the dry aggregates.</p>
Compatibility	<p>SikaPlast®-3120 AE may be combined with all types of Portland cement (OPC and SRC), concretes containing pozzolanic materials such as; Microsilica (Silica Fume), Fly Ash (PFA), GGBS (Ground Granulated Blast Furnace Slag) and the following Sika products:</p> <ul style="list-style-type: none"> ▪ SikaPump® ▪ Sika® FerroGard® ▪ SikaFume® ▪ SikaFiber® ▪ Sika® Aer ▪ Sika® Stabilizer ▪ SikaControl® <p>We recommend that trial mixes be performed to establish the required performance when combining SikaPlast®-3120 AE with the above products or other admixtures. Please consult our Sika Technical Department.</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.

IMPORTANT CONSIDERATIONS

- When using SikaPlast®-3120 AE 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®-3120 AE 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.

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.

Sika Gulf B.S.C. (c)

Tel: +973 177 38188
Email: info@bh.sika.com
Sika Kuwait Cons. Mat. & Paints Co WLL
Tel: +965 22 282 296
Email: sika.kuwait@kw.sika.com
Web: gcc.sika.com

Sika UAE LLC

Sika MB Construction Chemicals LLC
Sika International Chemicals LLC
Tel: +971 4 439 8200
Email: info@ae.sika.com
Web: gcc.sika.com

Sika Saudi Arabia Limited

Sika Construction Chemicals for
Manufacturing LLC
Riyadh / Jeddah / Dammam / Rabigh
Tel: +966 12 692 7079
Email: info@sa.sika.com
Web: gcc.sika.com

Sika LLC - Oman

Master Builders Solutions LLC
(part of Sika)
Tel. +968 22 826 500
Email: info@om.sika.com
Web: gcc.sika.com



ISO 9001, 14001, 45001 – SGS
- Sika UAE LLC
- Sika International Chemicals LLC
- Sika Gulf B.S.C. (c)
ISO 9001, 14001 – SGS
- Sika Saudi Arabia Limited
ISO 9001, 14001 – TÜV
- Sika MB Construction Chemicals LLC
- Sika Construction Chemicals for Manufacturing LLC
- Master Builders Solutions LLC

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 ISO 45001.



Product Data Sheet

SikaPlast®-3120 AE
August 2024, Version 01.01
021301011000005742