BUILDING TRUST

BUILDING PRODUCT INFORMATION SHEET

Sika® Pump

Pumping aid for concrete

DESCRIPTION

Sika® Pump is a universal concrete admixture to improve the pumpability of difficult concrete mixes and protect concrete pumps and pipes from excessive wear.

USES

- Sika® Pump is mainly used for concrete mixes with variable fines, a low cement content or a poor particle size distribution (granulometry) and consequent low water retention capacity i.e. mixes which tend to segregate when pumped and/or create very high pump pressures.
- Even contaminated aggregates (i.e. with dirt and debris) can be pumped without excessive pump pressure by using Sika® Pump.

FEATURES

- Sika® Pump greatly increases the internal cohesion, plasticity and flexibility of the fresh concrete. This gives a considerable improvement in the workability and particularly the pumping characteristics of concrete mixes. Disjointed, jerky concrete pumping is greatly reduced or prevented and pump efficiency is significantly improved.
- The stress on the pipes and the concrete pump is reduced with Sika® Pump and their life is extended.
- Sika® Pump has no negative effects on the hardened concrete properties.
- Sika® Pump does not contain chlorides or any other substances that cause reinforcement corrosion and can be used without restriction for reinforced and prestressed concrete structures.

PRODUCT INFORMATION

Product identifier	Sika® Pump
Place of manufacture	Aotearoa New Zealand
Composition	Solution of polymer viscosity regulators
Packaging	20 litres, 200 litres and bulk delivery
Shelf life	6 months from date of production if stored in original, undamaged and sealed containers.
Storage conditions	Storage at temperatures between +5°C and +35°C. Protect from direct sunlight, frost and contamination. Frozen Sika® Pump can be reused after slowly defrosting at room temperature followed by thorough stirring.
Appearance and colour	Light green liquid
Density	~1.01 kg/L
Conventional dry material content	~4 %
Viscosity	~50 mPa s at 20°C
pH-Value	~9
Total chloride ion content	≤0.1 %
Equivalent sodium oxide	≤1.0 %

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information	Address	Sika (NZ) Limited 85-91 Patiki Road Avondale, Auckland 1026 New Zealand
	Phone number	0800 745 269
	Website	https://nzl.sika.com/
	Email address	info@nz.sika.com
	NZBN	9429000018791

BUILDING CODE INFORMATION

Building Code clauses	Note: This product on its own is not within the scope of the NZ Building Code. It is an additive / admixture for use in the manufacture of concrete, to enhance its performance properties in either its plastic or hardened state. When added to concrete that must comply with the NZ Building Code, and it used in accordance with Sika's technical literature, it will contribute to meeting the requirements of the following clauses: B1 Structure: Performance Clauses B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q) B1.3.4 B2 Durability: Performance clause B2.3.1-(a) not less than 50 years F2 Hazardous Building Materials: Performance clause F2.3.1
Building Code compliance statements	Performance B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q), B1.3.4: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete during the production phase it contributes to the hardened concrete meeting loading requirements arising from self-weight, imposed gravity loads, earthquake, wind impact, and the effects of creep and shrinkage over time. Performance B2.3.1 (a) 50 years: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete, mortar or grout during the manufacturing process it helps the hardened concrete to achieve its durability requirements and to remain serviceable for 50 years, or more. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 1997. Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

SYSTEM INFORMATION

Compatibility	Sika® Pump is best combined with a plasticizer from the Sikament® or ViscoCrete® ranges. Air entrainers (Fro-V5-A), retarders (Sika® Retarder) or accelerators (SikaRapid®) can be used in combination with Sika® Pump without affecting their efficiency and performance.When combined with these products, preliminary testing is always advisable. Our Technical Service Department will be pleased to assist you. When combined with products containing naphthalene sulphonate, preliminary stiffening behaviour testing should be carried out to ensure compatibility.

APPLICATION INFORMATION

DESIGN REQUIREMENTS

Design requirements for concrete that contains Sika admixtures, or other concrete additives are the responsibility of the ready mixed concrete producer and/or the concrete design engineer.

Recommended dosage	0.2% - 0.4% by weight of cement to increase the cohesion of difficult concrete mixes. 0.5% - 1.5% by weight of cement to reduce the pump pressure and compensate for missing fine aggregate fractions in the mix. Preliminary testing is required to determine the exact dosage for your specific conditions. Please contact Sika technical service for more information and asstistance.

DISPENSING

Sika® Pump is added to the cement / aggregate mix at the batching plant after the mixing water. Do not add to a dry mix! Sika® Pump achieves its maximum effect after a wet mixing time of 90 seconds. Sika® Pump changes the viscosity of the concrete mix somewhat, requiring a slightly higher mixer load than the basic mix at the same w/c ratio.

MAINTENANCE REQUIREMENTS

Once added the Sika admixture / additive becomes an integral part of the hardened concrete, mortar or grout. Refer to the supplier of that product for their maintenance instructions.

BASIS OF PRODUCT DATA

All technical data in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

Sika® Pump is normally combined with a plasticizer from the Sikament® or ViscoCrete® ranges. High quality concrete is produced with the use of Sika® Pump. The general rules for good concrete production and placement must be followed for Sika® Pump concrete.All necessary measures must be taken to ensure optimum placement and curing, as specified in SIA 262-2003. In particular, the recommendation in SN EN 206- 1 : 2000 for the minimum finest particle contents in pumped concrete should be followed (section NA 5.2.9).

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.

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.

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.

The building product/building product line is not subject to warning or ban under section 26 of the Building Act 2004.

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