Product Data Sheet
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Construction

Sikament®-NN

High Range Water Reducing Concrete Admixture

Product Description

A highly effective dual action liquid super-plasticizer for the production of free flowing concrete or as a substantial water-reducing agent for promoting high early and ultimate strengths.

It complies with ASTM C494 Type F and BS 5075 Part 3.

Uses

Sikament® -NN is used as a super plasticizer in the production of free flowing concrete such as:

- Slabs and foundations
- Walls, columns and piers
- Slender components with densely packed reinforcements
- Textured surface finishes

It is also used as water-reducing agent leading to high early strength concrete such as:

- Pre-cast concrete elements
- Pre-stressed concrete
- Bridges and cantilever structures
- Concrete where formwork must be removed quickly or early loading applied.

Advantages

Sikament® -NN provides the following properties:

As a super plasticizer:

- Workability is greatly improved.
- Increased place ability in slender components with dense reinforcement.
- Easy placing, less vibrating.
- Normal set without retardation.
- Significantly reduces the risk of segregation

As a water Reducer:

- Up to 20% water reduction.
- 16 hour compressive strengths increased by up to 100%.
- 28 day strengths improved by 40%
- Increased water tightness.

Chlorides free.

Technical Data

Base	Naphthalene Formaldehyde Sulphonate.
Appearance / Colour	Brown liquid
Density (at 20°C)	1.200 (ASTM C494)
Packaging	5 and 20 kg pails 220 kg drums Bulk Tanks packing available upon request
Storage conditions	Store in dry conditions, protected from direct sunlight and frost.
Shelf life	12 months from date of production if stored properly in undamaged and unopened original sealed packing.

Application

Dosage

0.6 – 3 % by weight of cement, depending on desired workability and strength.

Dispensing

Sikament® -NN can be added to the mixing water prior to its addition to the aggregates or directly to the freshly mixed concrete, where the plasticizing effect is more pronounced.

For Ready-mix concrete, Sikament® -NN is added to the concrete immediately prior to discharge and after further mixing has taken place for three minutes.

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Important Notes

Sikament® -NN is compatible with all types of Portland cement including SRC, may perform differently with variations in cement producers and cement chemical compositions.

Accidental overdosing of Sikament® -NN causes an extension of the initial setting time, however, no excessive amount of additional air will be entrained.

Sikament® -NN as a super Plasticizer

Concrete consistency

Mix.	Dosage and when added	Slump (cm)
1	Without Sikament® -NN.	5
2	1% Sikament® -NN with gauging water	12
3	1% Sikament® -NN immediately after making original.	15
4	1% Sikament® -NN ½ hr after making up concrete and further mixing for 1 min.	16

Concrete consistency – measured in terms of slump to DIN 1048 – with Sikament® -NN added at different times.

Concrete: PC 300 (Holderbank).

Granulomerty: 0/32 mm approximating to curve B of SIA Standard 162 w/c = 0.54 for all mixes.

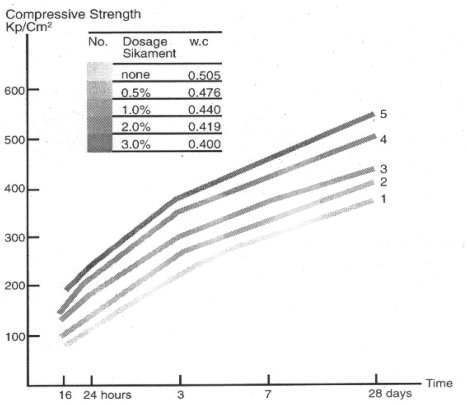
Sikament® -NN as an accelerator

Compressive strength of concrete

Development of compressive strength with different amounts of Sikament® -NN.

- Stored at 20°C and 95% R.H.
- Concrete: PC 300 (Holderbank).
- Granulometry: 0/32 mm in the region between curves A and B of SIA Standard 162.
- Consistency: Slump 4 cm for all mixes (materials testing lab of Sika AG)

For additional information please ask for a “Guide to free flowing concrete”.



Important Notes

Sikament® -NN is compatible with all types of Portland Cement including S.R.C.

Safety Instructions

Safety Precautions

Accidental splashes to the skin must be washed off with water and soap.

Accidental splashes to the eyes or mucous membrane must be rinsed with clean warm water. Seek medical attention.

Ecology

Residues of material must be removed according to local regulations.

Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.

Transport

Non-hazardous

Toxicity

Non-Toxic under relevant health and safety codes.

Legal notes

Sika Egypt for Construction Chemicals
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