

PRODUCT DATA SHEET

Sikament[®] NNR

SUPERPLASTICIZER / HIGH RANGE WATER-REDUCER

DESCRIPTION

Sikament[®] NNR is a highly effective admixture for concrete especially suitable for the production of free flowing concrete and for the production of high strengths concrete, especially in hot climatic conditions.

USES

Sikament[®] NNR acting as superplasticizer or as high range water-reducer, promotes a very high plasticity and good slump keeping properties to concrete. Sikament[®] NNR is mainly used for the following applications:

- Concrete with strong fluidity.
- High quality concrete.
- Concrete submitted to long transportation, delayed placing and high temperatures.
- Concrete with high water reduction while maintaining favourable consistency enabling good early strength development.

PRODUCT INFORMATION

Composition	Based on naphthalene formaldehyde sulphonate
Packaging	
Shelf life	12 months minimum from production date if stored in undamaged and unopened, original sealed packaging, in dry conditions at temperatures between +5 and +35 °C.
Storage conditions	Store in a dry area between 5°C and 35°C. Protect from direct sunlight.
Appearance and colour	Dark Brown Liquid
Density	1.20 ± 0.015
pH-Value	8.5 ± 1
Total chloride ion content	< 0.1%
Equivalent sodium oxide	< 1.5 %

FEATURES

Sikament[®] NNR provides the following properties:

As superplasticizer :

- Workability is greatly improved.
- Increase place ability in slender components with densely packed reinforcement.
- Enables easy placing, less vibration needed.
- Good slump keeping effect.

As high range water-reducer :

- Up to 25% of water reduction.
- Pronounced increase of final strengths.
- Reduced permeability for water.

CERTIFICATES AND TEST REPORTS

Complies with ASTM C 494 type G and EN 934-2 Table 11.1 and 11.2

Recommended dosage

0.4 – 3.0 % by weight of cement, depending on the requested performance of the concrete.

Usual dosage : 0.5 - 2.0 % by weight of cement.

It is advisable to carry out trial mixes to establish the exact dosage rate required

Dispensing

Sikament® NNR is added to the gauging water or can be added separately to the freshly mixed concrete. In this case, further mixing should take place for at least one minute per cubic meter.

Sikament® NNR can also be added to the concrete immediately prior to discharge and after further mixing has taken place for at least five more minutes.

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.

APPLICATION INSTRUCTIONS

Sikament® NNR allows the production of high performance concrete, as long as the composition is well design and standard rules of good concreting practice are followed (production as well as placing).

Fresh concrete must be cured properly and as early as possible especially in hot climatic conditions in order to prevent plastic and drying shrinkage.

- We recommend previous tests to determine the correct dosage of the admixture and whenever concrete composition is changed.
- When accidental overdosing occurs, the set retarding effect increases. During this period the concrete must be kept moist in order to prevent premature drying out.
- For further details contact our Technical Department.

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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