

PRODUCT DATA SHEET

Sika® Retarder R 107

(formerly MasterSet® R 107)

Low dosage, retarding and plasticizing admixture for concrete

DESCRIPTION

Sika® Retarder R 107 is a liquid admixture, which acts on cement particles in the mix, combining the effects of a powerful plasticiser and deflocculating agent with controlled retardation.

USES

- Hot weather concreting, where controlled delay to initial set is of prime importance.
- Ready-mix concrete, where workability retention coupled with retardation of initial set are beneficial.
- To improve cohesion, workability and compaction in concretes using poorly graded/shaped fine aggregates.
- Large slabs or bridge decks, etc., where extension of vibration limits is beneficial to avoid cold joints.

PRODUCT INFORMATION

Packaging	Sika® Retarder R 107 is available in 20L and 1000 litre IBCs or in bulk.
Shelf Life	Up to 12 months if stored according to manufacturer's instructions in unopened containers.
Storage Conditions	Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult the Sika Technical Services Department.

CHARACTERISTICS / ADVANTAGES

- Considerably extends vibration limit of concrete mixes, thus reducing incidence of honeycombing and cold joints.
- Reduces placing problems in hot weather concreting, by improving workability and workability retention.
- Improves trowelability and surface finish.
- Improves pumpability of concrete.
- Considerably reduces permeability.
- Enables economies in mix designs to be achieved.

APPROVALS / STANDARDS

ASTM C494 Types A, B and D
BS 5075: Part 1

Appearance / Colour	Brownish liquid
Density	1.160 – 1.180
Flash Point	Nil
pH-Value	6.0 – 8.0
Total Chloride Ion Content	Nil to BS 5075:1982
Effect on Setting	Sika® Retarder R 107 acts efficiently to give controlled retardation of initial set. Setting times of concrete mixes are related to cement type and ambient temperatures.

SYSTEM INFORMATION

Compatibility	<p>Sika® Retarder R 107 can be used with all types of Portland cement, including SRC. For use with other special cements, contact the Sika Technical Services Department.</p> <p>Sika® Retarder R 107 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing Sika® Retarder R 107, they must be dispensed separately.</p> <p>Consult the Sika Technical services department for advice.</p>
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APPLICATION INFORMATION

Recommended Dosage	<p>In all cases, we recommend that trial mixes are carried out to determine the correct levels of admixture required to achieve the desired concrete properties. Sika® Retarder R 107 is normally dispensed, depending on the desired plasticising or water-reducing effect, at a rate of 0.2-1.0 liter/100kg.</p> <p>Other dosages may be used, depending on the materials and conditions.</p> <p>EFFECTS OF OVER DOSAGE</p> <p>A severe over dosage of Sika® Retarder R 107 will result in the following:</p> <ul style="list-style-type: none"> ▪ Retardation of initial and final set. ▪ Slight increase in air-entrainment. ▪ Increase in workability. <p>Provided it is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete. The retarding effects of very high dosages will be exaggerated with SRC.</p>
Dispensing	<p>Sika® Retarder R 107 is introduced into the mixer with the mixing water. The admixture works more efficiently if it is added to the dampened mix after 50-70% of the water has been introduced.</p> <p>No extension to normal mixing time is necessary. Sika® Retarder R 107 should never be added to dry cement.</p>

BASIS OF PRODUCT DATA

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

ECOLOGY HEALTH AND SAFETY

Sika® Retarder R 107 is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information, refer to the material safety data sheet (SDS).

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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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