



Sika Retarder[®] 50

High Performance Retarding Admixture

Technical Data Sheet

DESCRIPTION

Sika Retarder 50 is formulated from phosphates which temporarily stop the chemical hydration of cement.

Sika Retarder 50 allows the production of retarded concrete with increased ultimate strengths.

Sika Retarder 50 is a ready to use liquid for producing a more uniformly cohesive quality concrete to meet the specifications and needs of Architects, Consulting Engineers and Contractors.

Sika Retarder 50 conforms to BS5075 Pt 1, 1982.

USES

- * Readymix concrete
- * Precast concrete
- * Pumped concrete
- * Lightweight concrete

ADVANTAGES

- * Accuracy of retardation
- * Long haul problems solved
- * High resistance to segregation/reduces bleeding
- * Higher initial and ultimate compressive strengths
- * Higher durability concrete

Technical Data (typical)

| | |
|--|---|
| Form: | Liquid |
| Colour: | Straw |
| Specific Gravity: | 1.2 @ 29°C |
| Air Entrainment: | No effect |
| Chloride Content | Nil (ie less tha 0.1% w/w) |
| Equivalent Sodium Oxide as % Na₂O: | 10.0% w/w |
| Effect on Setting: | Retardation to required level |
| Freezing Point °C: | -1°C |
| Compatibility: | Can be used with all types of Portland Cements and Sika Admixtures. It is recommended that admixtures are added to the concrete separately. |
| Cement Content (Kg/mm³): | 300 |
| A/C Ratio: | 6.37:1 |
| % Fines: | 42.9 |

All above values are approximate.

Compressive Strength Results (typical):

| Admixture | Dose % | w/c ratio | Slump (mm) | Air Cont % | 28 day Compressive Strength N/mm ² |
|------------------|--------|-----------|------------|------------|---|
| Control | None | 0.69 | 85 | 0.6 | 48 |
| Sika Retarder 50 | 0.2 | 0.69 | 85 | 0.6 | 50 |

Effect on Workability (typical):

| Admixture | Dose % | w/c ratio | Slump (mm) | Air Cont % | 28 day Compressive Strength N/mm ² |
|------------------|--------|-----------|------------|------------|---|
| Control | None | 0.60 | 75 | 0.5 | 48 |
| Sika Retarder 50 | 0.4 | 0.60 | 80 | 0.6 | 52 |

METHOD OF USE

PACKAGING

For maximum dispersion **Sika Retarder 50** should be added with the mixing water, on no account should it be added to the dry cement. Where concrete is being mixed by ready mixed trucks, **Sika Retarder 50** can be added at the batching plant but the trucks must rotate their drums until a uniform mix is achieved.

Sika Retarder 50 is supplied in 25 litre, 200 litre and 1000 litre containers.

DOSAGE

The dosage rate of **Sika Retarder 50** is best found after initial site trials, which will take into consideration the best performance/dosage rate. As a guide an addition rate of between 0.2–2.0% by weight of cement is recommended.

STORAGE AND SHELF LIFE

The product should be stored away from extremes of temperature and should be protected from frost. Storage life 12 months minimum from delivery.

Important Note: The following table gives a guide to dosage for **Sika Retarder 50**, it is recommended that trials are carried out to establish optimum performance of the concrete.

KEY – A: Dosage in % for slow cement B: Dosage in % for normal cement C: Dosage in % for fast cement

| Air Temperature | 10 Degrees C | | | 15 Degrees C | | | 20 Degrees C | | | 25 Degrees C | | | 30 Degrees C | | |
|-------------------|--------------|-----|-----|--------------|-----|-----|--------------|-----|-----|--------------|-----|-----|--------------|-----|-----|
| Initial set Hours | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C |
| 4 | | | 0.2 | | | 0.2 | | | 0.3 | | 0.2 | 0.3 | 0.2 | 0.3 | 0.4 |
| 6 | | | 0.3 | | 0.2 | 0.3 | | 0.3 | 0.4 | 0.2 | 0.4 | 0.5 | 0.4 | 0.5 | 0.6 |
| 8 | | 0.2 | 0.4 | | 0.2 | 0.3 | | 0.4 | 0.6 | 0.3 | 0.6 | 0.7 | 0.5 | 0.7 | 0.8 |
| 10 | | 0.3 | 0.5 | | 0.4 | 0.6 | 0.2 | 0.5 | 0.7 | 0.4 | 0.7 | 0.8 | 0.6 | 0.9 | 1.0 |
| 12 | | 0.4 | 0.6 | | 0.5 | 0.7 | 0.3 | 0.6 | 0.8 | 0.5 | 0.8 | 0.9 | 0.7 | 1.1 | 1.2 |
| 14 | | 0.5 | 0.7 | 0.2 | 0.6 | 0.8 | 0.3 | 0.7 | 0.9 | 0.6 | 0.9 | 1.0 | 0.8 | 1.3 | 1.5 |
| 16 | | 0.6 | 0.8 | 0.3 | 0.7 | 0.9 | 0.4 | 0.8 | 1.0 | 0.7 | 1.0 | 1.2 | 0.9 | 1.4 | 1.7 |
| 18 | 0.2 | 0.7 | 0.9 | 0.3 | 0.8 | 1.0 | 0.4 | 0.9 | 1.2 | 0.7 | 1.3 | 1.6 | 1.1 | 1.7 | 2.0 |
| 20 | 0.3 | 0.8 | 1.0 | 0.4 | 0.9 | 1.2 | 0.5 | 1.1 | 1.4 | 0.8 | 1.6 | 2.0 | 1.3 | 2.0 | |
| 24 | 0.3 | 0.9 | 1.2 | 0.5 | 1.2 | 1.5 | 0.7 | 1.5 | 1.9 | 1.0 | 1.8 | | 1.7 | | |
| 28 | 0.4 | 1.1 | 1.5 | 0.5 | 1.4 | 2.0 | 0.8 | 1.7 | | 1.2 | 2.0 | | 1.9 | | |
| 32 | 0.4 | 1.4 | 1.8 | 0.7 | 1.6 | | 0.9 | 2.0 | | 1.6 | | | | | |
| 36 | 0.5 | 1.6 | 2.0 | 0.8 | 1.8 | | 1.1 | | | 1.9 | | | | | |
| 40 | 0.5 | 1.8 | | 0.9 | 2.0 | | 1.3 | | | | | | | | |
| 44 | 0.6 | 2.0 | | 1.0 | | | 1.5 | | | | | | | | |
| 48 | 0.7 | | | 1.0 | | | 1.7 | | | | | | | | |
| 52 | 0.9 | | | 1.2 | | | 1.8 | | | | | | | | |
| 56 | 1.0 | | | 1.4 | | | 2.0 | | | | | | | | |
| 60 | 1.2 | | | 1.6 | | | | | | | | | | | |

Handling Precautions

Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

Important Note

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

Please consult our Technical Sales Department for further information

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Sikatard® 930

Concrete Stabiliser

Technical Data Sheet

DESCRIPTION

Sikatard 930 has been specifically developed to control cement hydration. Concrete mixes can be stabilised for extended periods with no loss of quality.

Sikatard 930 allows the production of retarded concrete with increased ultimate strengths.

Sikatard 930 is a ready to use liquid for producing a more uniformly cohesive quality concrete to meet the specifications and needs of Architects, Consulting Engineers and Contractors.

Sikatard 930 conforms to BS5075 Pt 3: 1982.

USES

- * The main usage of **Sikatard 930** is in the area of wet and dry sprayed concrete, where its addition inhibits cement hydration of the mortar or concrete. Therefore, stabilisation is enabled for many hours or even days.

ADVANTAGES

- * Cement hydration is blocked, unlike most set retarding admixtures, which merely slow down hydration
- * Flexible degree of retardation
- * High resistance to segregation/reduced bleeding
- * The effect of **Sikatard 930** is interrupted by the use of **Sigunite** set accelerator, such that the hydration will then begin immediately the concrete is sprayed
- * Contains nothing which will promote steel corrosion, so can be used in steel constructions
- * Higher initial and ultimate compressive strengths
- * Higher durability concrete

Technical Data (typical)

| | |
|--------------------------------|--|
| Form: | Solution in water of polycarbonic acid salts |
| Colour: | Clear |
| Specific Gravity: | 1.11 @ 20°C |
| Air Entrainment: | Minimal increase |
| Chloride Content % w/w: | Nil (to BS5075) |
| Effect on Setting: | Retardation to required level |
| Freezing Point °C: | -1°C |
| Compatibility: | Can be used with all types of Portland Cements and Sika Admixtures. It is recommended that admixtures are added to the concrete separately |

All above values are approximate.



METHOD OF USE

For maximum dispersion **Sikatard 930** should be added with the mixing water, on no account should it be added to the dry cement. Where concrete is being mixed in ready mixed trucks, **Sikatard 930** can be added at the batching plant but the trucks must rotate their drums until a uniform mix is achieved.

DOSAGE

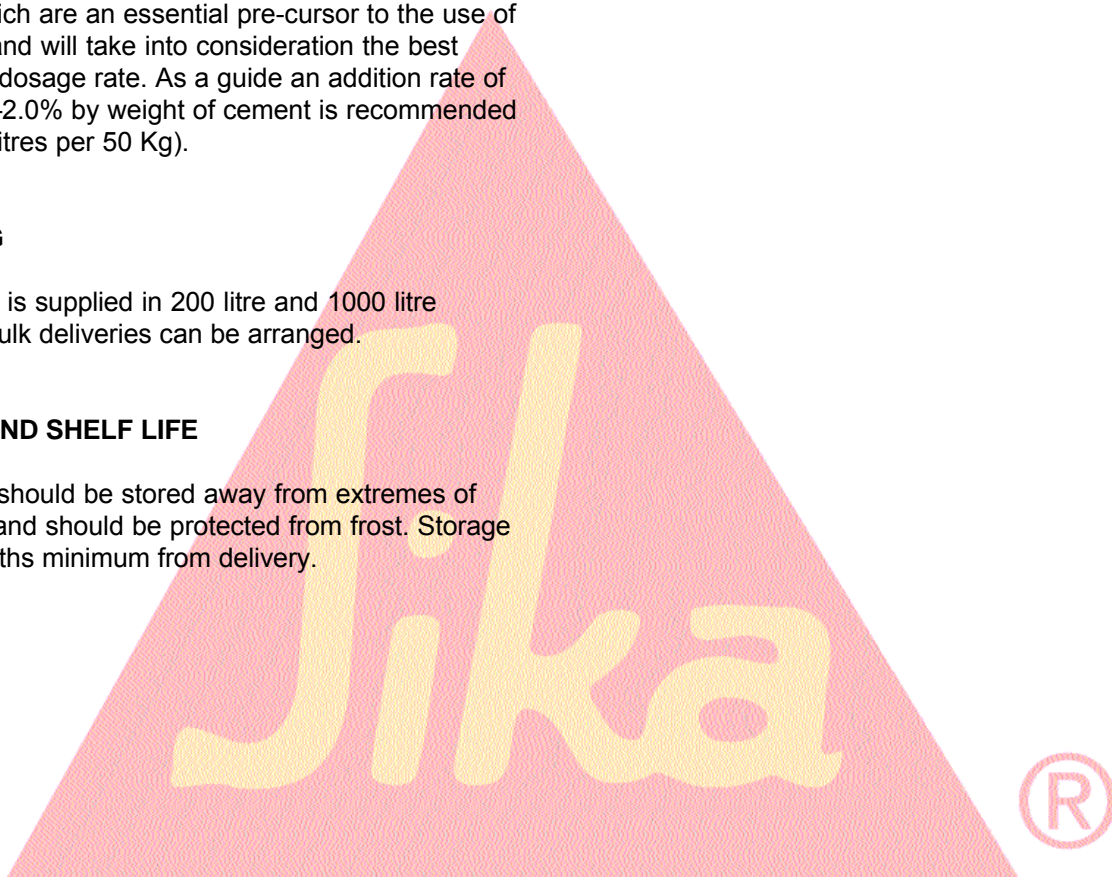
The dosage rate of **Sikatard 930** is best found after initial site trials, which are an essential pre-cursor to the use of this product and will take into consideration the best performance/dosage rate. As a guide an addition rate of between 0.2–2.0% by weight of cement is recommended (ie 0.10–1.0 litres per 50 Kg).

PACKAGING

Sikatard 930 is supplied in 200 litre and 1000 litre containers. Bulk deliveries can be arranged.

STORAGE AND SHELF LIFE

This product should be stored away from extremes of temperature and should be protected from frost. Storage life is 12 months minimum from delivery.



Handling Precautions

Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

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