



# Sika Retarder<sup>®</sup> 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.

Complies with EN 934 Part 2 Table 8 - Set Retarding Admixture.

#### 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

<b>Form:</b>	Liquid
<b>Colour:</b>	Pale Straw
<b>Relative Density @ 20°C:</b>	1.215
<b>Dry Material Content %:</b>	28.0
<b>pH Value:</b>	8.0
<b>Water Soluble Chloride Content %:</b>	<0.1 Chloride free
<b>Alkali Content %:</b> (as Na <sub>2</sub> O equivalent)	<10.0

Above data provided as manufacturers stated values in accordance with EN 934-2 General Requirements.

<b>Cement Content (Kg/mm<sup>3</sup>):</b>	300
<b>A/C Ratio:</b>	6.37:1
<b>% Fines:</b>	42.9

#### Compressive Strength Results (typical):

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

## METHOD OF USE

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.

## 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		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Initial set Hours															
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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