# Sika<sup>®</sup> Antifreeze-20

# Integrated additive for winter concreting

## Product description

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Product Description	Sika <sup>®</sup> Antifreeze-20 – hardening accelerator for concrete and mortar, which has the effect of antifreeze.		
Uses	Sika Antifreeze-20 is designed for production work on concreting the build structures at low and subzero temperatures of the environment.		
	Sika <sup>®</sup> Antifreeze-20 is used for:		
	<ul><li>production of concrete and mortar in the winter;</li><li>concreting at low temperatures.</li></ul>		
Advantages	fast set strength of concrete;		
_	low impact on the keeping of concrete mix;		
	weak placticizing offect:		

- weak plasticizing effect;
- no negative impact on the effectiveness of superplasticizers and other admixtures:
- provision of concrete hardening at low and subzero temperatures;
- reduction in the time of heating of structures;
- no negative effect on the properties of concrete.

Sika Antifreeze-20 does not contain a component that lead to the formation of ammonia in the concrete.

Sika<sup>®</sup> Antifreeze-20 does not contain chlorides or any other materials which promote the corrosion of steel reinforcement. It is therefore suitable for reinforced and pre-stressed concrete.

#### Product Data

Form	Aqueous solution of inorganic salts			
Appearance / Color	Transparent liquid orange color			
Density	1,17 – 1,19 kg/l (at 20°C)			
pH value	5,5 – 7,5			
Storage Conditions / Shelf Life	12 months from date of production if stored properly in undamaged and unopened original sealed containers, in dry conditions and at temperatures between -15°C and +35°C. Protect from direct sunlight and frost.			
Packaging	1000 litre IBC's, also available on tap			

## System Information

Consumption Dosage		Ambient temperature, °C				
Dosage		- 5 °C	- 10 °C	- 15 °C	- 20 °C	- 25 °C
	The dosage for the "warm" concrete,%	1	2	3	4	5

The dosage may vary to the big or the smaller side, depending on the requirements for concrete mix, and the optimal dosage is established based on laboratory tests. Dosage Sika Antifreeze-20 for "cold" concrete is chosen individually for each object on the basis of existing conditions.



**Application Instructions** 

Sika Antifreeze-20 is added to the mixing water or simultaneously with her in a mixer. To obtain a concrete mix homogeneous time mixing shall be not less 60 seconds during adjustment a production release party of concrete mix. After adjusting the mixing time in

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stationary mixer may be reduced by taking into account that further mixing will be done in concrete mixers.

You can add Sika <sup>®</sup> Antifreeze-20 in the truck mixer directly on the construction site. At the same time of mixing shall be a minimum of 1 minute per 1 m3 of concrete at high speed mixer. Before laying the necessary ascertained visually uniform consistency of concrete mixture.

In the production of concrete is recommended to use pre-warmed aggregates. The maximum temperature of mixing water should not exceed  $70^{\circ}$ C. The maximum temperature of the finished concrete mixture should not be above  $35^{\circ}$ C.

The temperature of concrete mix during laying as well as the grounds for which must be performed by laying the mixture should be above 5°C. You must use the standard technological measures on winter concreting to protect concrete structures from the thermal losses in the early stages of hardening.

The effectiveness of the additive depends on the type of cement and its expense.

#### **Notes on Application / Limitations**

#### Freeze/Thaw

If frozen and/or if precipitation has occurred, Sika Antifreeze-20 may only be used after thawing slowly at room temperature and intensive mixing.

#### Compatibility

Sika Antifreeze-20 blends well with the following materials of Sika:

- Sika ViscoCrete
- SikaPlast<sup>®</sup>
- Sikament \*\*
- Sika Plastiment

- SikaAer
- Sika Stabilizer
- Sika Pump

To obtain the necessary properties of the concrete mix when using Sika Antifreeze-20 with other additives need to holding laboratory tests to optimize the composition of the concrete mix.

### Safety Instructions

# Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet(MSDS) containing physical, ecological, toxicological and other safety-related data.

# Ecology

Do not empty of the soil, water or sewer. Dispose of publicly-local rules.

#### **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.

#### Клиентское и техническое обслуживание

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