

PRODUCT DATA SHEET

Sika® Injection-701

FLEXIBLE POLYMER MODIFIED MICROFINE CEMENT SUSPENSION FOR PERMANENT WATER-TIGHT SEALING

DESCRIPTION

Sika® Injection-701 is a flexible, polymer modified, micro fine cement suspension with a variable and adjustable reaction setting time.

USES

Sika® Injection-701 may only be used by experienced professionals.

Sika® Injection-701 is suitable for:

- Injection at higher temperatures in tropical and hot climate, where standard cement suspensions cannot be used.
- Injection and re-injection of SikaFuko® injection hoses to seal construction joints, or for grouting around injectable waterbars.
- Sealing (micro) - cracks and voids in concrete structures.
- Suitable for cracks with water infiltration.
- External injection sealing of construction, expansion and drainage system (pipe) joints, that are, or will be, covered with damp or saturated soil.
- Repair by injection of damaged Sikaplan® waterproofing membrane system (both single and double layer systems).
- Use in combination with Cathodic Corrosion Protection (CCP) systems.

CHARACTERISTICS / ADVANTAGES

- Adjustable curing time between 10 and 60 minutes.
- High stability of the suspension by polymer modification.
- Greater injection pressure limits.
- Flexible options for the product's application.
- Highly flowable consistency and high penetration effect.
- Solvent free, cement based, polymer modified system.
- Extremely low electrical resistance; does not have barrier or insulation properties.
- Cured Sika® Injection-701 is insoluble in water and hydrocarbons and also resistant to many acids and alkalis.
- Easy application with one component injection pumps.

APPROVALS / CERTIFICATES

- Wissbau No. 2006-197-1 – Function test with SikaFuko® Eco 1.
- RWTH Aachen M1376 – Investigation regarding reinforcement corrosion protection.
- IBAC Aachen B5555-2 – Expert opinion - Use of Sika® Injection-701 as a waterproofing injection material in reinforced concrete structures.

PRODUCT INFORMATION

Composition	4-part, polymer modified, microfine cement suspension	
Packaging	Component A, A1 and B will be delivered in a box, Component C comes separate in bags.	
	Resin Component (A)	2 × 2.65 kg (2.5 L)
	Accelerator (A1)	1 × 0.33 kg (300 mL)
	Hardener Powder (B)	2 × 20 g
	Cementitious Powder (C)	2 × 10.0 kg
	Total (SET)	25.67 kg

Colour	Resin Component (A)	blue – transparent
	Accelerator (A1)	yellow – transparent
	Hardener Powder (B)	white
	Cementitious Powder (C)	grey
Shelf life	12 months from date of production if stored correctly.	
Storage conditions	Sika® Injection-701 has to be stored in unopened, undamaged and original sealed packaging, in dry and lightproof conditions at temperatures between +10 °C and +30 °C.	
Density	Resin Component (A)	~1.06 kg/l (at +20 °C)
	Accelerator (A1)	~1.10 kg/l (at +20 °C)
	Hardener Powder (B)	~2.40 kg/l (at +20 °C)
	Cementitious Powder (C)	~0.9 - 1.5 kg/l (at +20 °C)
	Of mixture	~1.35 kg/l (at +20 °C)
Viscosity	Of mixture	~180 mPa·s (at +20 °C)

APPLICATION INFORMATION

Mixing Ratio	Dosage table: Use of Accelerator (A1) in mL for half of a set (per powder bag of 10 kg). If no reaction time is set the minimum volume of Accelerator (A1) for the temperature must be added.			
	Approximate re- action time (minutes)	Ambient / substrate / water / resin / suspension tem- perature		
		20 °C (68 °F)	30 °C (86 °F)	40 °C (104 °F)
	10		340	170
	15	400	250	130
	20	320	170	90
	30	190	90	30
	40	140	50	10
	50	110	30	
	60	90	20	
Yield	~30 L per Set			
Ambient Air Temperature	+5 °C min. / +40 °C max.			
Substrate Temperature	+5 °C min. / +40 °C max.			
Pot Life	Of suspension without accelerator and hardener > 8 hours			
Curing Time	10 to 60 minutes. Cured Sika® Injection-701 shall always be used in direct contact with damp or water saturated conditions.			

APPLICATION INSTRUCTIONS

MIXING

Procedure for half of a set:

A: Prepare suspension (2.5 L Resin Component (A) + 10 kg Cementitious Powder (C) + 7.5 L water) in mixing container 1

Mix water together with the Resin Component (A) for minimum 1 minute then add slowly the Cementitious Powder (C) (10 kg bag), mixing continuously at low speed.

After the Cementitious Powder (C) has been completely added, the suspension has to be thoroughly mixed for minimum 5 minutes (using high speed mixing > 3000 rpm). A colloidal mixer with a suitable high

shear mixing capability, or comparable compulsory mixing equipment is necessary.

Wait minimum 3 minutes and mix again (using high speed mixing > 3000 rpm) for minimum 2 minutes.

B: Premix Hardener Solution in mixing container 2

Mix 300 ml of water together with one 20 g bag of the Hardener Powder (B) and stir slowly until the white powder is dissolved. (The dissolved Hardener Powder (B) in water is called Hardener Solution).

The suspension and hardener solution may be split proportionally for the required injection amount.

C: Activate Sika® Injection-701

The product's workability time starts after adding the Hardener Solution and the required measured amount of Accelerator (A1) (see "Mixing Ratio" in APPLICA-

TION INFORMATION) into the mixed suspension.

Note:

- **Do not premix the Hardener Solution and Accelerator prior to use. Add them separately to the mix.**
- The temperature of the mixture can be increased by the action of colloidal mixing. Higher temperature can shorten the workability and curing times. Therefore it is best to use a colloidal mixer with minimum warming and to check the temperature before selecting and adding the amount of the accelerator. Leave the mixed material in the mixing container to cool down for 10 min before activating.
- Sika® Injection-701 is a reactive system. Activate only the amount of material you can use during the working time for each injection procedure.

APPLICATION METHOD / TOOLS

Sika® Injection-701 can be used with standard one component injection pumps.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be mechanically removed.

IMPORTANT CONSIDERATIONS

Suspension material skin may form, which has to be removed prior to injecting / further mixing. Reaction and workability time has to be tested prior to use on each project and application day.
At high ambient temperatures >30 °C cold water must be used and the material must be stored at cool temperatures prior to use.
At low temperatures a higher amount of the Accelerator (A1) can be necessary than in the packaging supplied. Accelerator (A1) can also be ordered separately. The conditions and location on site for the application must be inspected and surveyed, including any foundations and the ground conditions, before making any new watertight sealing surfaces (i.e. curtain injection) in close proximity to buildings, or within an existing structure. It must also be ensured that there are no drainage systems or open pipes close to the intended injection areas.

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. The temperature of mixture can increase by colloidal mixing. The higher temperature can effect a shorter curing time.

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 the exact product data and uses.

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.

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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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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