BUILDING TRUST

PRODUCT DATA SHEET

Sika® Injection-304

Polyacrylic elastic injection resin for permanent watertight sealing

DESCRIPTION

Sika® Injection-304 is a very low viscous, elastic and very quick-gelling polyacrylic injection resin with a gelling time adjustable within a range. The material reacts to form a waterproof, elastic and solid gel with good adhesion to both dry and wet substrates.

USES

Sika® Injection-304 may only be used by experienced professionals.

The Product is designed for:
- Sealing of all types of leaking building components in damp or water saturated ground
- Curtain injection
- Consolidation of non-cohesive soils with low permeability

Please note:
- The Product must only be used in below ground structures

CHARACTERISTICS / ADVANTAGES

- Permanently elastic
- Capable of reversibly absorbing (swelling) and releasing (shrinking) moisture
- Adjustable gelling times at various temperature ranges
- Very low viscosity compared to water
- Once cured the Product is insoluble in water and hydrocarbons and resistant to alkalis
- Resistant to alternating freeze and thaw exposure
- Injected with a two component pump

PRODUCT INFORMATION

Composition	3-part polyacrylic gel	
Packaging	Part A1 (Resin)	21.5 kg
	Part A2 (Accelerator)	1.05 kg
	Part B (Hardener)	1.00 kg
	Refer to the current price list for available packaging variations.	
Shelf Life	12 months from date of production	
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +35 °C. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Colour	Part A1 (Resin)	Amber - liquid
	Part A2 (Accelerator)	Colourless - liquid
	Part B (Hardener)	White powder

Density	Part A1 (Resin)	~1.20 kg/l	(EN ISO 2811-1)
	Part A2 (Accelerator)	~0.96 kg/l	
	Part B + water (Hardener)	~1.03 kg/l	
Viscosity	Complete mixture at +20 °C	~7 mPa·s	(ISO 3219)

APPLICATION INFORMATION

Mixing Ratio	A = A1 : A2	21.5 : 1.05 parts by weight
	B solution = water : B	20 : 1 parts by weight (Standard mixture)
	A : B solution	1 : 1 parts by volume
Ambient Air Temperature	Maximum	+40 °C
	Minimum	+5 °C
Substrate Temperature	Maximum	+40 °C
	Minimum	+5 °C

Reaction Time

Reference values depend on the concentration of Part B at various application temperatures.

B : Water = 0,5 % by weight

Material Temperature	Increase in viscosity	Reaction time
+10 °C	~220 s	~315 s
+20 °C	~103 s	~180 s

B : Water = 1,0 % by weight

Material Temperature	Increase in viscosity	Reaction time
+10 °C	~150 s	~225 s
+20 °C	~72 s	~150 s

B : Water = 2,0 % by weight

Material Temperature	Increase in viscosity	Reaction time
+10 °C	~85 s	~150 s
+20 °C	~45 s	~90 s

B : Water = 3,0 % by weight

Material Temperature	Increase in viscosity	Reaction time
+10 °C	~56 s	~110 s
+20 °C	~37 s	~68 s

B : Water = 5,0 % by weight (standard mixture)

Material Temperature	Increase in viscosity	Reaction time
+10 °C	~50 s	~80 s
+20 °C	~28 s	~40 s

The data above are laboratory parameters and may deviate depending on the situation and conditions on site.

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

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

MIXING

Mixing the components

Note: Mix the combined Parts A1 and A2 and the solution of Part B to water in two identically sized mixing vessels. Assess the amount of water required for dissolving the Part B (approximately 18,0 litres) by adjusting the volume of Part B to that of Part A.

PREPARE PART A1 AND PART A2:

1. Immediately before use mix Parts A1 and A2 at a mixing ratio of 21.50 : 1.05 parts by weight.
2. Empty the smaller container (Part A2) completely into the container of Part A1.
3. Mix the parts thoroughly with a mixer using a paddle attachment.

PREPARE PART B SOLUTION:

1. IMPORTANT Use a non-corroding paddle attachment. Immediately before use dissolve Part B (powder) in water by thoroughly mixing using a paddle attachment for 2–3 minutes.Note Use a clean plastic container for mixing.

APPLICATION

IMPORTANT

Environmental considerations

Failure to properly assess the jobsite and the scope of the application can lead to a loss of Product performance.

1. Survey the jobsite to assess foundations and ground conditions before carrying out curtain injection in close proximity to or within existing structures.
2. Check to make sure there are no open pipes or drainage systems close to injection areas.
3. Assess the feasibility of the injection proposal, material consumption and positioning of drill holes.
4. Prior to use check the Product's gel time within the local site ambient conditions.
5. Contact Sika technical services for specific information on resistance to hydrocarbons or chemicals.

IMPORTANT

Pump seizure

The pump may seize or become unusable if material accumulates within the suction hose sieves.

1. Regularly check the suction hose sieves for material residue and perform intermediate cleaning cycles.

IMPORTANT

Pump blockage caused by cured material

The pump may become blocked if unused material is allowed to cure inside the pump.

1. After finishing the injection works clean the 2-C-pump thoroughly with minimum 20 L of fresh, clean water per component-side.

The Product is injected by a 2- component pump with an additional water flushing pump.

1. Prepare the material according to the mixing instructions and pump directly from the containers. Note Material will be mixed and activated in the static mixer of the pump`s mixing head
2. As soon as the material is cured, remove the packers.
3. Clean out drill holes approximately 10 cm deep.
4. Seal drill holes with a mortar plug.

CLEANING OF TOOLS

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

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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