

PRODUCT DATA SHEET

SikaFix®-301

ACRYLATE INJECTION RESIN FOR SEALING AND STABILISATION IN TUNNELLING AND MINING

DESCRIPTION

SikaFix®-301 is a very low viscous, hydrophilic acrylate based injection resin, with short adjustable reaction times.

USES

SikaFix®-301 may only be used by experienced professionals.

Sealing and stabilisation of heading faces in sand and silt ground conditions

- Tunnelling
- Mining
- Below ground construction works

Rock stabilization

- Fine fissures
- Crevices
- Broken rock

Sealing water-bearing zones in rock

- Dams
- tunnels
- Mines

Soil Consolidation

CHARACTERISTICS / ADVANTAGES

- Adjustable reaction time from ~2 to ~10 minutes
- Slight swelling factor up to 10 %
- Very fast curing
- Easy application (mix ratio by volume of 1:1)
- Excellent penetration capabilities
- Hydrophilic

APPROVALS / STANDARDS

- Fire Behaviour Classification EN 13501-1, SikaFix®-301, MPA Braunschweig, Test report No. K-3268/490/14-MPA BS

PRODUCT INFORMATION

Composition	3-part acrylate resin	
Packaging	Combipack Unit: Net weight 24 kg	
	Part A (Resin)	1 × 20 kg
	Part B (Accelerator)	2 × 1 kg
	Part C (Hardener)	4 × 500 g

All of the components are also available separately. They may be ordered in larger quantities or bulk.

Refer to current price list for packaging variations.

Colour	Part A (Resin)	Colourless liquid
	Part B (Accelerator)	Red and transparent liquid
	Part C (Hardener)	White Powder
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 +5 °C and +30 °C. Always refer to packaging.	
Density	~1.05 kg/l (+20 °C)	
Viscosity	~3–6 mPa·s (+21 °C)	

TECHNICAL INFORMATION

Swelling	10 % by weight
Reaction to Fire	Class E (EN ISO 11925-2 / EN 13501-1)

APPLICATION INFORMATION

Mixing Ratio

Accelerator Metering Chart

Reaction time	Ambient Temperature and Accelerator quantity (ml)				
	+5 °C (+41 °F)	+10 °C (+50 °F)	+20 °C (+68 °F)	+30 °C (+86 °F)	+35 °C (+95 °F)
2 min	4000	1000	500	250	200
3 min	2000	650	250	150	110
4 min	1000	380	170	85	75
5 min	500	250	120	65	58
6 min	430	215	85	50	46
7 min	360	200	75	40	35
8 min	320	180	65	33	28
9 min	300	150	55	29	23
10 min	230	130	50	27	21

1 : 1 parts by volume (also refer to mixing instructions)

Values of the metering chart are valid for a 10 % hardener solution using Part C (Hardener).

Part A (Resin) is activated by Part B (Accelerator). The necessary quantity of Part B (Accelerator) is determined according to the metering chart above considering the ambient and/or substrate temperature and the speed of reaction time required for the work.

~20 L Part A (Resin) are mixed with between 0.5 % up to 10 % of Part B (Accelerator) (0.14 L to 2.0 L)

Ambient Air Temperature	+5 °C min. / +40 °C max.
Substrate Temperature	+5 °C min. / +40 °C max.
Curing Time	~2–10 minutes (Dependent on substrate temperature, plus the amount of accelerator and hardener used)

APPLICATION INSTRUCTIONS

MIXING

Mixing sequence

1. Resin solution

Determine the required quantity of accelerator (Part B) from the accelerator metering chart (Table 1). As a

guide: 0.5 % up to 10 % (0.14 to 2.0 L). Mix thoroughly with 20 L of Part A (Resin).

2. Hardener solution

Pour ~18 L of water in a clean container. Dissolve ~2.0 kg of Part C (Hardener) powder in the water. Stir with a mixer at low speed the hardener solution thoroughly until Part C is completely dissolved.

APPLICATION METHOD / TOOLS

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Inject mixed solutions of SikaFix®-301 with a 2 component acrylate injection pump with a static mixing nozzle. The pump must be calibrated to work at a ratio of 1: 1 by volume.

CLEANING OF TOOLS

Clean all tools and application equipment in accordance with the Product Data Sheet for the Sika® Injection Cleaning System.

Short interruptions of injection work

Mixing equipment can be cleaned with water immediately after use. Hardened material can only be mechanically removed. The 2-component acrylate injection pumps have an additional rinsing pump for cleaning.

FURTHER DOCUMENTS

- Product Data Sheet: Sika® Injection Cleaning System

IMPORTANT CONSIDERATIONS

Installation work must only be carried out by Sika® trained and /or approved contractors, experienced in this type of application.

- Use injection lances or packers / ports with a sufficiently large flow opening.
- Site trials must be undertaken before starting the injection work in order to verify the optimum mix ratios and setting times for the specific conditions.

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.

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.

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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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