BUILDING TRUST

PRODUCT DATA SHEET

# Sika® Injection-304

Polyacrylic elastic injection resin for permanent watertight sealing

## PRODUCT DESCRIPTION

Sika® Injection-304 is a very low viscous, elastic and very quick-gelling polyacrylic injection resin with a versatile and adjustable gelling time. 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.

- Sealing all types of leaking building components in damp or water saturated ground
- Post-construction, external injection sealing system for construction, expansion and drainage pipe joints, that are covered with damp or water saturated soil e.g. curtain injection
- Consolidation of non-cohesive soils with low permeability

## CHARACTERISTICS / ADVANTAGES

- Permanently elastic
- Capable of reversibly absorbing (swelling) and releasing (shrinking) moisture
- Adjustable gelling times at various temperature ranges
- Very low viscosity comparable to water
- Cured Sika® Injection-304 is insoluble in water and hydrocarbons and resistant to acids and alkalis
- Resistant to alternating freeze and thaw exposure
- Injected with a two component pump

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **Chemical Base** | 3-part polyacrylic gel | |
| **Packaging** | Part A1 (Resin) | 20.5 kg |
| | Part A2 (Accelerator) | 1.0 kg |
| | Part B (Hardener) | 0.95 kg |
| | Refer to current price list for 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. | |

| | | | |
|---|---|---|---|
| **Color** | Part A1 (Resin) | Amber - liquid | |
| | Part A2 (Accelerator) | Colorless - liquid | |
| | Part B (Hardener) | White powder | |
| **Density** | Part A1 (Resin) | ~1.20 kg/l | (ISO 2811) (+20 °C) |
| | Part A2 (Accelerator) | ~0.96 kg/l | |
| | Part B* (Hardener) | ~1.03 kg/l | |
| | * After dilution with water | | |
| **Viscosity** | ~7 mPa·s (complete mixture, +20 °C) | | (ISO 3219) |

## APPLICATION INFORMATION

**Mixing Ratio**

| | |
|---|---|
| A = A1 : A2 | 20 : 1 parts by weight |
| B solution = water : B | 20 : 1 parts by weight (Standard mixture) |
| A : B solution | 1 : 1 parts by volume |

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

**Reaction times**

(PM 10081-11)

| | 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.

| | | |
|---|---|---|
| **Ambient Air Temperature** | +5 °C min. / +40 °C max. | |
| **Substrate Temperature** | +5 °C min. / +40 °C max. | |
| **Cure Time** | ~40 s (with 5 % Component B, at 20 °C) | (PM 10081-11) |

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## LIMITATIONS

- Sika® Injection-304 must be used in below ground structures.
- The conditions and location of the site the application must be inspected and surveyed, including any foundations and ground conditions, before making any new watertight sealing surfaces (curtain injection) in close proximity to buildings or within existing structures. It must also be ensured that there are no drainage systems or open pipes close to the injection areas. This survey provides information to assess the feasibility of the injection proposal, possible material consumption and positioning of the drill holes.
- Prior to the use of Sika® Injection-304, check the gel time according to the local site ambient conditions.
- Take into consideration that potlife (workability after mixing) has a shorter time than gel time (product is no longer able to be pumped/injected).
- Contact Sika technical services for specific information on resistance to hydrocarbons or chemicals.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## APPLICATION INSTRUCTIONS

### MIXING

**Mixing sequence**

**1. Part A**

Mix Parts A1 and A2, which are provided according to their required mixing ratio of 20 : 1 parts by weight, immediately before use. Empty the smaller container (Part A2) completely into the container of Part A1. Mix the parts thoroughly with a suitable stirrer / mixing paddle. Part A is sensitive to light and must be stored in and applied from light-proof containers.

**2. Part $B_{solution}$**

Part B is a powder concentrate and must be mixed with water on site immediately before use. Dissolve the powder in a clean plastic vessel by thoroughly stirring it for 2–3 minutes with a V4A-steel or other suitable stirrer.

**3. Part A + Part $B_{Solution}$**

Part A (A1 + A2) and Part B solution (Part B + water) shall be mixed in two identically sized vessels. Assess the amount of water required for dissolving the Part B (approx. 18.0 liters or 4.75 gallons) by adjusting the level/volume of Part B to that of Part A.

### APPLICATION METHOD / TOOLS

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.
Sika® Injection-304 must only be injected with a 2-Part stainless steel injection pump.

### CLEANING OF TOOLS

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

## OTHER RESTRICTIONS

See Legal Disclaimer.

## LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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