

1. Product Description

StenCare® 2IP-4 is a solvent-free, two-component polyurethane-based injection resin with a 1:1 mixing ratio. It rapidly hardens in contact with water, creates an impermeable foam and stops leaking.

2. Uses

StenCare® 2IP-4 is used to provide waterproofing in underground constructions and tunnel applications. The material does not react even after mixing of two components until it comes into contact with water. **StenCare® 2IP-4** penetrates deeply, filling voids and cracks between layers with resin.

When contacted by water, it cuts off water flow by creating an impermeable and semi-flexible foam. It allows deeper and longer-range injections.

3. Application

StenCare® 2IP-4 is used by mixing at a 1:1 ratio by volume with a high-pressure, two-component injection pump. Product packages are packed so that the components are 1:1. Before application, components A and B are checked against freezing or any contamination.

Frozen or contaminated products must not be used. The injection machine operates properly only when both components are homogeneous liquids. Two-component injection pumps are fed by two components of **StenCare® 2IP-4**.

Ensure each component is fed to the correct line. It is possible to mix both components and use a single-component injection pump if no two-component pump is available. In this situation 4 hours of pot life must be obeyed and extra care should be taken to make sure that all the equipment is dry.

If the injection machine pump and lines contain protective oil or similar liquids, material must be pumped until clean **StenCare® 2IP-4** comes out of the nozzle. The application should be started after making sure that the pump and lines are clean. During the application process, several holes are drilled into the substrate.

Gasketed, single-use injection packers are placed in the holes. Injection of **StenCare® 2IP-4** begins from the bottom packer. When material appears at the next packer up, injection is continued from that packer.

When material appears at the topmost packer, injection is stopped, indicating that the cavity is filled with polyurethane. Especially for low-pressure applications, an injection head and static mixer are recommended. **StenQuick IP** can be added to the system if faster curing is desired.

StenQuick IP should be added to component A and component A should be mixed before application.

4. Cleaning

The application machine must be carefully cleaned by pumping protective material through the pump and lines.

Waterproofing Polyurethane Injection Foam

Highlights

- Polyurethane water-stopping foam
- Activation with water
- Low viscosity
- Slow gelling
- Perfect adhesion to concrete
- Low flammability
- Solvent-free, does not contain harmful volatiles to health (VOC=0)
- Safe application with low exotherm



5. Safety

Applicators and supervisors must read the Material Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be handled in compliance with relevant regulations and laws. The application must be carried out by skilled workers under supervision of experts and the applicators must use all kinds of protective equipment required for the worksite and the task such as goggles, mask and gloves.

6. Storage

The material must be kept in dry indoor storage. Recommended storage temperature is 5-30 °C. Under these conditions, the material will retain its properties in unopened containers for 12 months from the production date.

Low temperatures may cause crystallization of the product; in this case, the product can be used after heating and homogenizing at +20 °C. The product must be stirred thoroughly before use after prolonged storage.

7. Disclaimer

This document is provided for general information and reflects **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information at any time without notice.

Stenkim® warrants that its products conform to the stated specifications on delivery. The buyer is responsible for determining the product's suitability for the intended application and for all conditions of transport, storage, handling, and use. **Stenkim®** accepts no liability for results obtained under conditions outside its control. **Stenkim®**'s liability under this warranty is limited to replacement of non-conforming product and excludes any consequential or indirect damages.

8. Technical Data

Property	Method	Result
Chemical Composition		Polyurethane resin and isocyanates
Solid Content	EN ISO 3251	100
Color		Amber
Density (Component A)	EN ISO 2811-2	0.99 kg/l
Density (Component B)		1.24 kg/l
Density (Cured Resin)		1.11 kg/l
Mix Ratio (A:B)		1:1 (by volume) 1:1.2 (by weight)
Skin Formation Time @23 °C, 50% RH		15 minutes
- 5% StenQuick IP		12 minutes
- 10% StenQuick IP		10 minutes
Viscosity	EN ISO 3219	250 cP
Shelf Life		1 Year
Packaging		66 kg plastic containers, 460 kg drums or 2,200 kg IBC sets



Stenkim® reserves the right to make changes to the values in this table at any time.

