FAQ Distribution and Direct

Injection

1) **How to seal leakages on cracked concrete?**

1-component or 2-component PU injection foam/resin can be used to seal leakages on cracked concrete.

1-component PU injection foam	*Sika Injection®-107 MY, Sika Injection®-125 MY*
2-component PU foam/resin	*Sika Injection®-201 CE, Sika Injection®-101 RC, Sika Injection®-216*

For more information, please consult Sika's Technical Department.

2) **What is the difference between a PU injection foam and PU injection resin?**

PU injection foam *requires water to react. As it reacts, it will foam and expand to stop the water leaks within a short period. PU Injection foam are normally injected into cracks that are constantly wet with flowing water.*

PU injection resin *do not foam when in direct contact with water (non-reactive to water). It is used for permanent water-tight sealing with some flexibility to absorb limited movement, in dry or damp cracks and joints. It is not suitable to be injected into cracks that are constantly wet with flowing water.*

PU Injection foam	*Sika Injection®-107 MY, Sika Injection®-125 MY, Sika Injection®-101 RC, Sika Injection®-216*
PU Injection resin	*Sika Injection®-201 CE*

For more information, please consult Sika's Technical Department.

3) **How to drill packer holes for crack injection?**

Refer to Figure 1

Drill injection holes at an angle of 45° to the concrete.

Before drilling the injection holes, locate the rebar and conduit, and plan the drilling layout to minimize damage to the structure and the drilling bit.

Refer to Figure 2

Dimension of the packer hole is dependent on the packer diameter and thickness of the concrete:

Ø of drill hole = Ø of packer + 1 mm

Depth of drill hole:

d = minimum depth to reach the middle of the crack at approximately 45° drilling angle, where:

d = concrete thickness

d/2 = interval from packer to packer and from packer to crack

The packer will be placed alternately on both sides of the crack.

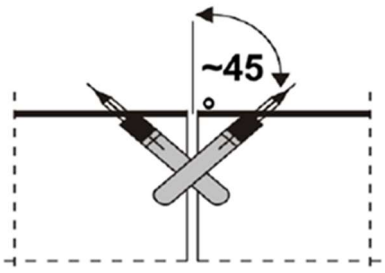


Figure 1

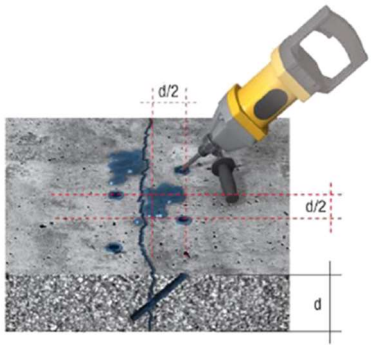


Figure 2

For more information, please consult Sika's Technical Department.

4) How to repair structural concrete cracks?

*A 2-component **polyurethane structural injection resin** can be used to seal structural concrete cracks. Cracks may be dry, damp or wet, but free from standing water*

*Alternatively, a 2-component solvent free, **low viscosity epoxy injection resin** can also be used to seal structural concrete cracks.*

Polyurethane structural injection resin	*Sika Injection®-216*
Low viscosity epoxy injection resin	*Sikadur®-52 MY, Sikadur®-52 LV MY*

For more information, please consult Sika's Technical Department.

5) Can I inject a 2-component product with a single component pump?

Yes, this is normally possible for products with long open-time/pot-life.
For more information, please consult Sika's Technical Department.

6) What is the maximum pressure allowed during injection?

A good injection is an injection at low pressure for as long as possible in order to fill all the fine cracks/gaps. Normally, an injection pressure of ~300 psi (~20 bar) or lower should be sufficient in sealing the cracks (for damp and low-pressure flowing water in cracks).

Important Note:
The assumption that higher pressure will result in better sealing of the cracks should be discarded. Therefore, always maintain injection at low pressure for as long as possible.
For more information, please consult Sika's Technical Department.

7) What is curtain injection?

In curtain injection, injection resin is injected into the surrounding soil creating an impermeable gel/soil matrix that prevents water from entering the structure. The resin can be injected from within the structure, or from outside the structure.
For more information, please consult Sika's Technical Department.

8) What material do I use for curtain injection?

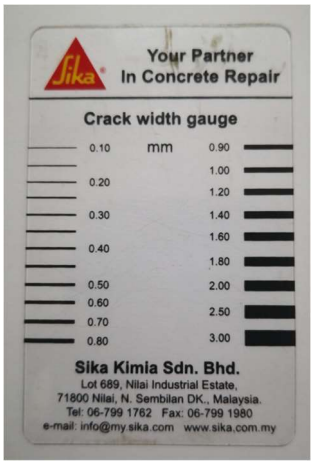
Elastic and very quick-gelling injection *material is normally used in curtain injection and in situations that has high velocity water gushing out from the structure. In this situation a fast setting (within several seconds) 2-component material is required. Normally, a 2-component pump is used to inject the resin.*

Elastic and very quick-gelling injection resin for curtain injection	Sika Injection®-304

For more information, please consult Sika's Technical Department.

9) How to measure crack width in concrete?

Crack width in concrete can be measured with Sika's ***Crack Width Gauge****. Other methods such as filler gauge can also be used.*



For more information, please consult Sika's Technical Department