

Description

rbs Injection Resin LV Kit is specifically formulated as a two component, low viscosity, fast curing epoxy sealing system for repairs to cracks in concrete and solid masonry.

rbs Injection Resin LV Kit comprises two main products:

- A rapid cure thixotropic injection port adhesive and crack surface sealer.
- A low viscosity, 100% solids epoxy.

Where to Use

- Low pressure injection of cracks in structural concrete and solid masonry.
- Gravity feed of cracks in horizontal concrete and horizontal solid masonry.

Advantages

- As strong as concrete.
- Convenient mix in the nozzle cartridge system for both the crack sealer and the injection resin.
- Cartridges that fit standard caulking guns.

Packaging

| Item Description | Number of Items Per Kit |
|--|-------------------------|
| 300ml Crack Sealer | 2 |
| Mixer Nozzles | 2 |
| Applicator Fan | 2 |
| 250ml Injection Resin | 3 |
| Cartridge Outlet Plug | 2 |
| Injection Resin Mixers with Extension Tube | 2 |
| Push Fit Connector | 1 |
| Injection Ports | 16 |
| Pairs of Gloves | 2 |
| Wooden Applicators | 2 |
| Instruction DVD | 1 |

Coverage

- The crack sealer yields approximately 300ml.
- The crack injection resin yields approximately 250ml.

Limitations

- Minimum substrate and ambient temperature 41°F / 5°C. Maximum substrate temperature 95°F / 45°C.
- Minimum age of concrete must be 21-28 days, depending on curing and drying conditions.
- Do not apply over wet, glistening surfaces.
- Not for injection of cracks subjected to osmotic or hydrostatic pressure during application.
- Do not inject cracks greater than 1/4in. (6mm). Consult Technical Services.
- Not an aesthetic product. Colour may alter due to variations in lighting and/or UV exposure.

Technical Data

Injection Resin

| | |
|-----------------------|---|
| Shelf life | 18 months in original unopened containers |
| Storage Conditions | Store dry at 40 - 75°F / 5 - 24°C |
| Colour | Clear amber |
| Mixing Ratio | Component A : Component B 1:1 by volume |
| Viscosity Mixed | 500cps at 72°F / 23°C |
| Typical Mixed Density | 9.2lb/gal / 1.1g/cm ³ |
| Typical Pot Life | 25 - 30 minutes (60 gram mass) at 72°F / 23°C |
| Tack Free Time | 3 hours at 72°F / 23°C |
| Typical Cure Time | 12 hours at 68°F / 20°C |
| VOC | ASTM D2369 - 5.4% |

| Compressive Strength, ASTM D 695 | | 40°F / 5°C | 68°F / 20°C | 95°F / 35°C |
|----------------------------------|-------------------|------------|-------------|-------------|
| 4 Hours | PSI | - | - | 580 |
| | N/mm ² | - | - | 4 |
| 8 Hours | PSI | - | - | 2320 |
| | N/mm ² | - | - | 16 |
| 16 Hours | PSI | - | 2465 | 3625 |
| | N/mm ² | - | 17 | 25 |
| 1 Day | PSI | - | 3480 | 5365 |
| | N/mm ² | - | 24 | 37 |
| 3 Days | PSI | 1595 | 8990 | 5655 |
| | N/mm ² | 11 | 62 | 39 |
| 7 Days | PSI | 6670 | 9425 | 7105 |
| | N/mm ² | 46 | 65 | 49 |
| 14 Days | PSI | 7975 | 9715 | 7975 |
| | N/mm ² | 55 | 67 | 55 |
| 28 Days | PSI | 9426 | 10150 | 10150 |
| | N/mm ² | 65 | 70 | 70 |

Physical Properties:

| Test | Test Standard | Value | |
|---|---------------|-------------------------|---------------------------------------|
| | | Imperial | SI |
| Viscosity Mixed 73°F / 23°C | ASTM D 2393 | 500cps | |
| Pot Life 73°F / 23°C, 2.1oz / 60g Mass | ASTM C 881 | 30 minutes | |
| Compressive Strength 7 Days @ 73°F / 23°C | ASTM D 695 | 9425psi | 65N/mm ² |
| Compressive Modulus 7 Days @ 73°F / 23°C | ASTM D 695 | 232000psi | 1.69GN/m ² |
| Tensile Strength 7 Days @ 73°F / 23°C | ASTM D 638 | 6235psi | 43N/mm ² |
| Elongation at Break 7 Days @ 73°F / 23°C | ASTM D 638 | 25% | |
| Tensile Modulus 7 Days @ 73°F / 23°C | ASTM D 638 | 261000psi | 1.8GN/m ² |
| Flexural Strength 7 Days @ 73°F / 23°C | ASTM D 732 | 10150psi | 70N/mm ² |
| Bond Strength 2 Days @ 73°F / 23°C (Dry Cure) | ASTM D 897 | 464psi concrete failure | 3.2N/mm ² concrete failure |
| Bond Strength 3 Days @ 60°F / 15°C (Moist Cure) | ASTM D 897 | 290psi concrete failure | 2.0N/mm ² concrete failure |
| Water Absorption 7 Days @ 73°F / 23°C | ASTM D 570 | 0.24% | |
| Heat Deflection Temperature 7 Day @ 73°F / 23°C | ASTM D 648 | 109.7°F | 43.2°C |

Technical Data

Crack Sealer

| | |
|-----------------------|---|
| Shelf life | 18 months in original unopened containers |
| Storage Conditions | Store dry at 40 - 75°F / 5 - 24°C |
| Colour | Concrete grey |
| Mixing Ratio | Component A : Component B 1:10 by volume |
| Typical Mixed Density | 14.2lb/gal / 1.7g/cm ³ |
| Typical Cure Time | 12 hours @ 68°F / 20°C |
| VOC | ASTM D2369 - 4.3% |

Opening & Injection Times:

| Temperature | Open Time | Injection Time |
|--------------|------------|----------------|
| 41°F / +5°C | 18 minutes | 145 minutes |
| 50°F / +10°C | 10 minutes | 85 minutes |
| 68°F / +20°C | 6 minutes | 50 minutes |
| 77°F / +25°C | 5 minutes | 40 minutes |
| 86°F / +30°C | 4 minutes | 35 minutes |

Directions For Use

The following notes are of necessity general in nature, since each injection application is unique and must be assessed on its own merits, but they may be used as guidelines. An application video is also available on the Resapol website.

Substrate preparation:

A successful application depends on very thorough preparation. The crack to be treated must be dry and free from grease, oil, dust and other contaminants. Any loose material must be blown or brushed clear.

For vertical cracks (walls, columns, beams) – The surface of the crack should be sealed with the fast setting Crack Sealer supplied. Crack Sealer should also be used to fix the injection ports. The distance between the injection ports should be greater than the estimated depth of the crack (typically 1.5 times).

For horizontal cracks (floors, slabs etc) – The Crack Sealer and injection ports may not be required as the resin may be introduced into the crack by gravity.

Crack Sealer & Injection Resin set-up:

Crack sealer – Open screw cap, cut film to remove metal clip and attach nozzle, extrude to waste until a uniform colour is achieved. For applying the Crack Sealer to the injection ports the nozzle has a fine tip. To fix the fan the fine tip is easily snapped off. Use the fan to apply the Crack Sealer over the surface of the crack.

Injection resin – Remove screw cap, insert outlet plugs, attach mixer nozzle with extension tube*. Extrude to waste to form a homogeneous mix. Use the push fit connector to connect to injection port.

* For horizontal cracks (floors, slabs, etc), remove the extension tube.

Application:

For vertical cracks (walls, columns, beams) – The resin should be injected into the first (lower) port. When resin begins to flow from the adjacent port close off the first port and disconnect the hose. Reconnect to the second port and inject until resin starts to flow from the third; this process is repeated until the whole crack has been

injected**. After the resin has been allowed to cure, the injection ports and capseal should be removed and any holes or voids made good.

For horizontal cracks (floors, slabs etc) – To gravity feed cracks seal the underside of the substrate prior to filling if the crack reflects through. Dispense the injection resin slowly into the vee-notched crack. Continue injecting until completely filled**.

** The material is specially designed to flow into all areas of a crack, even the smallest fissures. As a result, special care must be used when using the material in very porous substrates, as it is likely to be absorbed by the substrate. This may result in a loss of volume of the material in the crack leading to an under filled crack.

Health & Safety

For H&S info please refer to the relevant material safety data sheet.

Important Note

Whilst all reasonable care is taken in compiling technical data on the company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the company.

It is the customer's responsibility to satisfy himself that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable and that, in the light of our continual research and development programme the information relating to each product has not been superseded.

The information given on this sheet is, to the best of our knowledge, true and accurate. No guarantee of the results implied, or any loss or damage arising out of this material, however, are possible as the conditions of application are beyond our control. This is not withstanding any liability arising from the Consumer Protection Act 1987 and the Health & Safety at Work Act. Health and Safety data is available on this product and should be referred to prior to its use

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For more information on the Resapol Foundation, please visit our website at www.resapol.com.

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