

## Description

rbs Injection Resin LV Kit is a concrete crack injection repair kit that has been 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:

- Crack Sealer - for sealing concrete & masonry surface cracks & for fixing injection ports.
- Injection Resin - an epoxy resin for repairing cracked concrete or masonry.

## 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

- Low viscosity, fast curing crack sealer and epoxy-based injection resin.
- Fast repairs to concrete and masonry cracks.
- As strong as concrete when cured.
- Suitable for walls and floors.

## Packaging

Each box contains the complete kit that comprises of:

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

## Coverage

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

## 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.

## Cartridge set-up:

**Crack Sealer cartridge** – 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 cartridge** – 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 Crack Sealer 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.

## Technical Data Injection Resin Cartridge

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 <sup>3</sup>
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 <sup>2</sup>	-	-	4
8 Hours	PSI	-	-	2320
	N/mm <sup>2</sup>	-	-	16
16 Hours	PSI	-	2465	3625
	N/mm <sup>2</sup>	-	17	25
1 Day	PSI	-	3480	5365
	N/mm <sup>2</sup>	-	24	37
3 Days	PSI	1595	8990	5655
	N/mm <sup>2</sup>	11	62	39
7 Days	PSI	6670	9425	7105
	N/mm <sup>2</sup>	46	65	49
14 Days	PSI	7975	9715	7975
	N/mm <sup>2</sup>	55	67	55
28 Days	PSI	9426	10150	10150
	N/mm <sup>2</sup>	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 <sup>2</sup>
Compressive Modulus 7 Days @ 73°F / 23°C	ASTM D 695	232000psi	1.69GN/m <sup>2</sup>
Tensile Strength 7 Days @ 73°F / 23°C	ASTM D 638	6235psi	43N/mm <sup>2</sup>
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 <sup>2</sup>
Flexural Strength 7 Days @ 73°F / 23°C	ASTM D 732	10150psi	70N/mm <sup>2</sup>
Bond Strength 2 Days @ 73°F / 23°C (Dry Cure)	ASTM D 897	464psi concrete failure	3.2N/mm <sup>2</sup> concrete failure
Bond Strength 3 Days @ 60°F / 15°C (Moist Cure)	ASTM D 897	290psi concrete failure	2.0N/mm <sup>2</sup> 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 Cartridge

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 <sup>3</sup>
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

## 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 Resapol.
- Not an aesthetic product. Colour may alter due to variations in lighting and/or UV exposure.

## 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 responsibility of the customer to satisfy themselves that each product is fit for the purpose for which they intend to use it. Ensure 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](http://www.resapol.com).

## Resapol Ltd

Unit D4, Moss Industrial Estate, Walter Leigh Way,  
 Leigh, Lancashire WN7 3PT

T 0800 083 1942 E [sales@resapol.com](mailto:sales@resapol.com)

[www.resapol.com](http://www.resapol.com)