

Technical Manual

Flexible two-component polyurethane injection resin

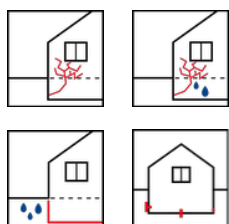
CrackFlex is a high quality, two component, flexible polyurethane resin with very low viscosity. Developed for wet and dry crack sealing.

Properties

- ❖ The product does not need water to react. Without water, the material becomes an elastic seal. In case of water the material slightly foams
- ❖ Excellent adhesion to concrete and metal
- ❖ Curing process does not cause shrinkage, volume remains the same
- ❖ Will not dry out after curing
- ❖ Does not cause corrosion of metals
- ❖ Resin bonds well with ResinBau WaterStopper (two-stage injection)



Areas of application



- ❖ Injection of cracks in concrete according to EN 1504-5
- ❖ For elastic sealing of wet, damp and dry cracks in walls, floors, concrete structures, underground structures against water with injection hoses
- ❖ It is characterized by both high ductility and good adhesion to the substrate which makes it possible to fill very small cracks
- ❖ Cracks filled with CrackFlex resin, due to its toughness and elasticity, can remain tight even under dynamic loads
- ❖ Injections for stabilising / sealing / reinforcing masonry and other building structures

Product specifications

	Component A	Component B	Mixed
Color	Transparent	Dark Brown	Brown
Viscosity (20 °C)	300 mPas	34 mPas	130 mPas
Density (20 °C)	0,99 g/cm ³	1,07 g/cm ³	1,027 g/cm ³
Elongation at break			60-95%
Hardness, fully cured (Shore)			60-85
Tensile strength	2.2 N/mm ²		

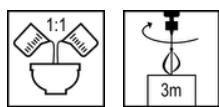
Optional additional products

- ❖ ResinBau WaterStopper - for stopping active leakage (two-stage injection)
- ❖ ResinBau CrackOn.5 - mortar to close crack faces
- ❖ Hamm-pack® PI-Cleaner for cleaning injection pumps
- ❖ Injection Pump 1K / 2K
- ❖ Hamm-pack® injection packers

Preparatory work for injection

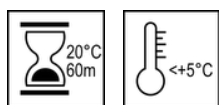
- ❖ This product is intended for professional users only
- ❖ Prior to injection a structural analysis must be carried out
- ❖ The substrate must be stable and compact, without loose parts or substances that reduce adhesion, such as grease, oil, etc.
- ❖ Correctly drill holes, depending on the work to be carried out
- ❖ Cracks or loose parts of the joints are suggested to be forged / punched and cleaned from construction dust, so that they can be surface sealed with putty (ResinBau CrackOn)
- ❖ The openings should be blown out with compressed air or water
- ❖ Packers must be installed

Resin preparation



- ❖ Components A + B (complete 1:1) Pour component B into component A at a ratio of 1:1 by volume Using a slow mixer, mix thoroughly. Remember! Water and humidity as well as elevated temperatures significantly accelerate the reaction time
- ❖ Mix in such quantities as to be able to process them quickly Fresh resin is much less viscous, which results in better distribution in the construction (resin more easily fills the crack / saturates the construction)

Application method



- ❖ Material, ambient and substrate temperature should be above 5°C
- ❖ Processing time at 20°C is 60 minutes

Processing time	60 min. in 20 °C
The time after which the mixture is no longer liquid	10 h in 12 °C
	6 h in 25 °C
Time after which the mixture is completely cured	7 days in 12 °C
	5 days in 25 °C

- ❖ Prepare the pump for application according to manufacturer's recommendations
- ❖ The pressure at which the resin will be applied depends on the crack structure and size
- ❖ Start the application at the lowest point of the crack
- ❖ Continue the application until the resin leaks out of the adjacent packer
- ❖ This procedure is necessary in order to achieve an even distribution of the material
- ❖ Stop pumping, disconnect the hose from the nipple packer and move on to the next one
- ❖ Continue the procedure until the crack is completely filled

Cleaning after work

- ❖ Clean the pump and equipment with Hammpack® PI-CLEANER every time the work stoppage is longer than 15 minutes and after finishing the application.
- ❖ Take care to maintain proper safety conditions during cleaning.
- ❖ When the cleaner escapes from the injection hose, flush it out with an appropriate amount of Hammpack® PI-SAVER maintenance product.

Storage Shelf life

- ❖ In a dry place at 10 °C - 30 °C
- ❖ Shelf life 12 months from date of manufacture in original, unopened packaging. Once opened, the shelf life of the product decreases very quickly.

Safety

- ❖ Wear protective goggles, gloves and clothing. Avoid contact with skin and eyes.
- ❖ In case of eye contact: Rinse thoroughly with clean water and consult a doctor.
- ❖ In case of skin contact: rinse abundantly with water.
- ❖ Component B may react with water or atmospheric moisture to form CO₂ gas. This can create pressure in a closed container or a container that has already been opened.
- ❖ Mix CrackFlex residue with sand and dispose of the mixed material according to local regulations.

EN: Danger - H315 - Irritates the skin; H317 - May cause an allergic skin reaction; H319 - Irritates the eyes; H332 - Harmful if inhaled; H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled; H335 - May cause respiratory irritation; H351 - Suspected of causing cancer; H373 - May cause damage to organs through prolonged or repeated exposure. - P201 - Obtain special instructions before use; P202 - Do not use before reading and understanding all safety precautions; P260 - Do not breathe dust, smoke, gas, mist, spray or vapour; P264 - Wash hands, forearms and face thoroughly after use; P271 - Use only outdoors or in a well-ventilated area; P272 - Do not remove contaminated work clothes from the workplace; P280 - Wear safety glasses, face protection, protective clothing, gloves; P284 - Wear respiratory protection; P302+P352 - IF ON SKIN CONTACT: Wash with plenty of soap and water; P304+P340 - IF INHALED: Remove person to fresh air and ensure breathing; P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if accessible and easy to remove. Rinse continuously; P308+P313 - IF exposed or contacted: Seek medical advice/attention; P312 - If you feel unwell, contact a POISON CENTER or doctor; P321 - Specific treatment (see additional first aid instructions on this label); P332+P313 - If skin irritation occurs: Seek medical advice/attention; P333+P313 - If skin irritation or rash occurs: Seek medical advice/attention; P337+P313 - If eye irritation persists: Seek medical advice/attention; P342+P311 - If respiratory symptoms occur: Contact a POISON CENTER or doctor; P362+P364 - Remove contaminated clothing and wash before reuse; P403+P233 - Store in a well-ventilated area. P405 - Keep container tightly closed; P501 - Dispose of contents/container at hazardous or special waste collection point in accordance with local, regional, national and/or international regulations. - Contains: diphenylmethane-4,4' diisocyanate; Diphenylmethane diisocyanate, isomers and homologues.



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0749 - CPR
BC2-565-2779-0002-001

EN 1504-5
Resins and injection systems
U (D1) W (1) (1/2/3) (5/30)
Plastic Crack Filling

Adhesion and elongation
to elongation

Adhesion:
On dry concrete slab: 0.6 N/mm²
On wet concrete slab: 0.63 N/mm²

Elongation: >10%.

Elongation at 3°C	>10%
Watertightness	≥ 2 x 10 Pa
Glass transition temperature	41.8°C
Injection into dry medium	high injectivity for widths from 0.3 mm
Injection in other media than dry	high injectivity for widths from 0.3 mm
Initial viscosity of the mixture (20°C)	130 mPas
Expansion coefficient	No data available
Workability time	60 min (20°C)
Durability - concrete compatibility	Confirmed
Susceptibility to corrosion:	It is assumed that no corrosive influences

Hazardous substances Available in safety data sheet para. 2.2

