

Flex 6811LV

Flexible Water Sealing 2 component Polyurethane Injection Resin

1. Description

Two component MDI-based polyurethane injection resin with very low viscosity. Flex 6811 LV reacts in wet or dry cracks and joints. When Flex 6811 LV comes in contact with water, the material will react and start to foam. In the absence of water, Flex 6811 LV will react to form a flexible seal.

2. Applications

Water sealing of cracks and joints in walls, floors, concrete elements, sewers etc.

FLEX 6811 LV does not need water in order to react. The 2 components react with each other. The important property of this material is its excellent adhesion to concrete and metal. Flex 6811 LV does not require a primer. The curing process does not cause any shrinkage, so the volumes remain the same. Once completely cured the PU resin does not swell on contact with water, nor will it dry out or corrode metals. In order to obtain optimal water sealing properties within concrete elements Flex 6811 LV maybe combined with other PU water reactive foams.

3. Properties

- Injection within wet and dry structures
- Injection to very fine cracks
- Elastic water sealing of cracks and joints in walls, floors and other concrete elements
- Injection of injection tubing

4. Technical data (typical values)

- A-component:
 - Appearance: colourless liquid
 - Viscosity (20° C): 78 mPas
 - Density: 1.009 g/ml
- B-component:
 - Appearance: dark brown liquid
 - Viscosity (20° C): 76 mPas
 - Density: 1.136 g/ml
- Mixture:
 - Appearance: brown liquid
 - Initial viscosity (20° C): 78 mPas
 - Density: 1.076 g/ml
- Evaluation of the reactivity at 20 °C: time needed for a mixture of 470.6 g Flex 6811 LV A and 529.4 g Flex 6811 LV B to rise in temperature from 20 °C to 40 °C: 13 minutes.
- Pumpable time: 150 minutes at 12 °C, 90 minutes at 25 °C

Stabila UK Ltd. Oxon. OX27 7SR
tel 01869 346010 fax 01869 345455

- Time after which the mixture is not liquid anymore: 10 hours at 12 °C, 6 hours at 25 °C
- Time after which the mixture is completely cured: 7 days at 12°C, 5 days at 25°C
- Mixing ratio (weight): 1.2 kg A / 1.35 kg B
- Shore A (after 5 days at 25 °C): 72
- Watertightness under pressure (EN 14068): waterproof at 2 x 10⁵ Pa
- Compatibility with concrete (EN 12637-1): pass (compatible with concrete)
- Modulus of elasticity (EN ISO 527, after 5 days at 25 °C): 6.6 MPa
- Tensile strength (EN ISO 527, after 5 days at 25 °C): > 3 N/mm²
- Elongation at break (EN ISO 527, after 5 days at 25 °C): 128 %
- Injectability into a dry sand column (EN 1771, 0.1 mm - 0.3 mm): easy to inject
- Injectability into a wet sand column (EN 1771, 0.1 mm - 0.3 mm): easy to inject
- Adhesion and elongation at 3 °C (EN 12618-1):
 - Adhesion to dry concrete: 1.30 N/mm²
 - Adhesion to wet concrete: 0.63 N/mm²
 - Adhesion to a sandblasted metal plate: 3.59 N/mm²
 - Elongation at 3 °C: 117 %
- Glass transition temperature (EN 12614): - 35.2 °C
- Shelf life: 12 months after its production date if in original, unopened and undamaged packaging. FLEX 6811 LV has to be stored in a dry place between + 10°C and + 30°C. Once the packaging has been opened the product should be used immediately.

5. Processing

Mix the Flex 6811 LV A and the Flex 6811 LV B to the correct ratio (1/1 volume or 1.2/1.35 weight). Inject this mixture through a pump within the pumpable time / or work with a two-component pump (volumetric ratio of 1:1).

6. Packaging

Flex 6811 LV A and Flex 6811 LV B are delivered in separate tins. The volumetric ratio is 1/1.

- Flex 6811 LV A: 12 kg
- Flex 6811 LV B: 13,5 kg
- Weight of the mixture: 25,5 kg



7. Cleaning

Clean the pump and equipment every time there is a stop of more than 15 minutes and at the end of the injection process.

8. Precautions and security measures

- Avoid contact of Flex 6811 LV with the skin and eyes.
- Wear safety glasses, gloves and an overall.
- In case of contact with the eyes: wash with lots of water and seek medical attention.
- In case of contact with the skin: wash with lots of water.
- Absorb spilled resin with sand and dispose according to the local regulations.
- The Flex 6811 LV B component can react with water or humidity in the air and produce CO₂ gas.
- Mix any surplus of Flex 6811 LV with sand and remove according the local regulations.
- Consult the MSDS-sheet.



EN 1504-5
Concrete injection product
U(D1)W(1)(1/2/3)(5/30)
Ductile filling of cracks

Watertightness	$\geq 2 \times 10^5$ PA
Workability	Crack width from 0,1 mm Moisture state of the crack: dry, damp, moist
Corrosion behaviour	Deemed to have no corrosive effect
Glass transition temperature	- 35.2°C
Adhesion and elongation capacity at 3°C	Adhesion: On dry concrete slab: 1.30N/mm ² On wet concrete slab: 0.63N/mm ² On sandblasted metal plate: 3.59N/mm ² Elongation:>10%
Durability . Compatibility with concrete	Pass
Dangerous substances	Comply with 5.4

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