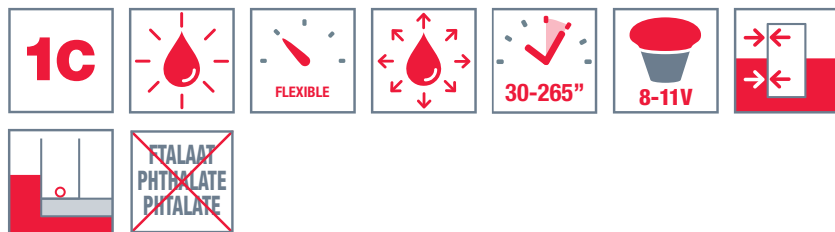


SPETEC® SEAL F400



LOW VISCIOUS, FLEXIBLE INJECTION RESIN FOR SEALING LEAKING JOINTS AND CRACKS.



DESCRIPTION

One component, closed cell, hydrophobic, water reactive, phthalate free, low viscosity polyurethane injection resin for stabilisation and water cut-off of large water leaks.

In contact with water the SPETEC® SEAL F400 will expand and set as a permanent flexible water seal inside the crack or joint.

ADVANTAGES

- One component
- Different reaction times are possible by adjusting the percentage of SPETEC® Gen Acc. To get an even faster reaction, there is also a SPETEC® Gen Acc Fast accelerator available.
- Cured polyurethane is flexible, shrink-free and exhibits good chemical resistance (contact our Technical Service for more information)
- Cured polyurethane is harmless for the environment and resistant to biological attacks.

FIELD OF APPLICATION

- Shut off water leaks in concrete, brickwork and sewers where movement and settlement may occur
- Injecting very fine joints, cracks and microcracks < 0.5 mm
- Water cut-off of water leaks in foundations such as diaphragm walls, piling sheets and secant piles
- Sealing water-carrying cracks and joints in tunnel segments
- Curtain grouting behind tunnel, concrete, brickwork and sewer walls
- Injection of water cut-off membranes and liners in tunnels
- Injection of preventively placed injection tubes

APPLICATION

Note : the following is a typical application description. In case of other jobsite parameters, please contact our technical department.

PRELIMINARY ANALYSES

For leaking joints, check how the joint runs into the construction. Injection holes have to be drilled into the joint.

For leaking cracks, drill the injection holes in a zig-zag pattern around the crack to make sure that the injection hole intersects with the crack.



REQUIRED TOOLS

Drill and drill bits of appropriate diameter and length
Packers of appropriate diameter and length
Injection pump; manual, pneumatic or electric.

PREPARATION OF THE SUBSTRATE

Drill under an angle of 45° into the crack or joint. Ideally the injection hole should intersect the joint or crack about half way the thickness of the wall or slab.

Blow the dust out of the injection hole.

Fix a packer of the right diameter into the injection hole.

PREPARATION OF THE PRODUCT

Read the technical and safety data sheets prior to commencement of the injection works.

Vigorously shake the SPETEC® Gen Acc or the SPETEC® Gen Acc Fast before use. Pour the required amount (2-10%) into the SPETEC® SEAL F400 resin.

Mix the accelerator homogeneously into the resin and protect against moisture and rain to prevent premature reaction.

Only prepare that amount of product that can be processed in one day.

PREPARATION OF THE EQUIPMENT

Depending on the application, injection can be carried out using a hand pump, pneumatic pump or electric pump.

Always use a separate pump for injection of water and PUR resin.

Check that the pump is working properly.

Prior to injection, the pump must be flushed with SPETEC® PUMP CLEANER and be completely free of water to prevent pump blockage.

INJECTION

Start the injection at the first packer; for vertical joints or cracks this is usually the lowest packer.

Do not over pressurise while injecting; the correct injection pressure is the pressure that allows to resin to flow into the crack or joint.

Avoid injecting at pressures of more than 100 bars.

If unreacted resin comes out of the joint or crack, stop the injection and move on to the next packer.

After the last injection of resin into the packer, shoot a little bit of water into the packer in order to make sure that the last injected resin will react as well.

FINISHING

After injection, remove the packers from the concrete and fill the holes with a fast setting cement or any other appropriate filler material.

APPLICATION CONDITIONS

Avoid injecting by temperatures below -20°C. In extreme cold conditions it is recommended to warm the resin and catalyst.

CLEANING AND MAINTENANCE

After the injection, clean the pump with SPETEC® PUMP CLEANER. If the pump will not be used for several days, put oil into the pump and leave it there until the next usage. Never rinse the pump with water.

RESIPLAST

RESIPLAST® - A brand of KORAMIC Construction Chemicals.
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COMPLIMENTARY PRODUCTS

SPETEC® PUMP CLEANER
 SPETEC® PACKERS & ACCESSORIES
 CERMIPLUG

ADVICE / FOCAL POINTS

Water must always be present during the injection of SPETEC® SEAL F400 as it is a water-reactive resin.

TECHNICAL DATA**APPEARANCE**

| | | |
|--|--------------------------|---------------------------|
| SPETEC® SEAL F400, uncured (Appearance: white liquid) | | |
| Viscosity at 25°C | Brookfield SP4 - 200 rpm | ± 350 mPa.s |
| Density | EN ISO 2811-1 | ± 1,06 kg/dm ³ |

| | | |
|--|--------------------------|---------------------------|
| SPETEC® Gen Acc, Accelerator for SPETEC® SEAL F400 (Appearance: yellow - orange liquid) | | |
| Viscosity at 25°C | Brookfield SP3 / 200 rpm | ± 75 mPa.s |
| Flash point | | 156°C. |
| Density | EN ISO 2811-1 | ± 1,05 kg/dm ³ |

| | | |
|--|--------------------------|---------------------------|
| SPETEC® Gen Acc Fast, Accelerator voor SPETEC® SEAL F400 (Appearance: yellow - orange liquid) | | |
| Viscosity at 25°C | Brookfield SP3 - 200 rpm | ± 70 mPa.s |
| Flash point | | 156°C. |
| Density | EN ISO 2811-1 | ± 1,05 kg/dm ³ |

REACTION TIMES

| SPETEC® Gen Acc | 5°C | | | 15°C | | | 25°C | | |
|--------------------|------|-------|-----|-------|------|-------|------|-------|-----|
| | % | Start | End | Start | End | Start | End | Start | End |
| 2 | 110" | 265" | 8V | 70" | 215" | 8V | 45" | 145" | 8V |
| 6 | 45" | 115" | 10V | 31" | 81" | 10V | 25" | 58" | 10V |
| 10 | 35" | 80" | 11V | 21" | 60" | 11V | 15" | 40" | 11V |

| SPETEC® Gen Acc Fast | 5°C | | | 15°C | | | 25°C | | |
|----------------------------|-----|-------|-----|-------|------|-------|------|-------|-----|
| | % | Start | End | Start | End | Start | End | Start | End |
| 2 | 70" | 180" | 9V | 40" | 120" | 9V | 30" | 95" | 9V |
| 6 | 30" | 75" | 10V | 20" | 55" | 10V | 15" | 45" | 10V |
| 10 | 17" | 50" | 11V | 15" | 40" | 11V | 10" | 30" | 11V |

CONSUMPTION

Consumption has to be assessed on site and is influenced by the amount of water leaking, thickness of the concrete slab or wall, presence of voids in and around the concrete etc.

CHEMICAL RESISTANCES

Cured polyurethane exhibits good chemical resistance, is harmless for the environment and resistant to biological attack. (contact our Technical Service for more information)

REFERENCE DOCUMENTS

Approved for contact with drinking water.

PACKAGING

| | | | |
|-------------------|--------|-------------|-----------------|
| SPETEC® SEAL F400 | 5 kg | Metal cans | 92 cans/pallet |
| | 20 kg | Pails | 24 pails/pallet |
| | 200 kg | Steel drums | 4 drums/pallet |

| | | | |
|-----------------|--------|-----------------|-----------------------------------|
| SPETEC® Gen Acc | 0,5 kg | Plastic Bottles | 12 bottles/box 40 boxes/pallet |
| | 2 kg | Plastic Bottles | 4 bottles/box 44 boxes/pallet |
| | 20 kg | Pails | 24 pails/pallet |

| | | | |
|----------------------|------|-----------------|----------------------------------|
| SPETEC® Gen Acc Fast | 2 kg | Plastic Bottles | 4 bottles/box 44 boxes/pallet |
|----------------------|------|-----------------|----------------------------------|

STORAGE AND SHELF LIFE

SPETEC® SEAL F400 is moisture sensitive and should be stored in a dry area between +5°C and +30°C.

Shelf life of the resin: 24 months after production date, in original packaging.

Shelf life of the accelerator: 24 months after production date, in original packaging

Once opened, containers should be used as soon as possible.

SAFETY PRECAUTIONS

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations.

Read the relevant Material Safety Data Sheet before use. Material Safety Data Sheets are available on www.spetec.com

When in doubt contact SPETEC® Technical Service.

The above information is provided in good faith, but without any guarantees. The application, use and processing of the products are beyond our control and are, as such, the sole responsibility of the user/processor. In the event that Resiplast N.V. is still held liable for damages, then the claim will still be limited to the value of the goods delivered. We always aim to deliver consistently high quality goods. All values on this technical sheet are average values that result from tests carried out under laboratory conditions (20°C and 50% RH). Values that are measured on the construction site may show a slight deviation since the environmental conditions, the application, and the way of processing our products are beyond our control. Do not add any products other than those indicated on the technical documentation. This version replaces all previous versions. Version 2.0 Date: 1 October 2020 11:59 am