

SPETEC® SOIL N180



2 COMPONENT POLYURETHANE INJECTION RESIN FOR STABILISATION APPLICATIONS AND VOID FILLING.



DESCRIPTION

Medium viscous, 2 components, solvent and phthalate free, expansive, polyurethane resin developed for stabilizing railway ballast, for improving and stabilisation of various loose types of soil and filling voids.

ADVANTAGES

- Excellent adhesion to all substrate types
- Hard foam with outstanding structure reinforcing properties
- High tensile strength
- Expansion up to 1400%
- SPETEC® SOIL N180 can be pumped and poured
- Cured polyurethane is shrink-free and exhibits good chemical resistance (contact our Technical Service department for more information)
- Cured polyurethane is functional between -40°C and +100°C
- Cured polyurethane is harmless for the environment and resistant to biological attacks.

FIELD OF APPLICATION

- Railway ballast stabilisation (during excavation or tunneling of railway lines)
- Dike and slope stabilisation
- Securing anchors and foundation piles
- Restoration of load-bearing capacity below floors
- Foundation stabilisation
- Filling voids

APPLICATION

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

PRELIMINARY ANALYSES

Check whether the soil or the area to be injected is porous enough. This, to be sure if the resin will penetrate sufficiently into the substrate.

Clay soil types can not be injected.

Check the level of the groundwater table if possible.

Consider all existing structural elements in the area and the possible consequences that may be caused by the injection works. If necessary, consult a geotechnical and / or structural stability engineer.

Locate all available utilities in the area and / or in the soil before the start of the application.

REQUIRED TOOLS

2 components, injection pump with a 1:1 volume ratio.

Hoses.

Injection gun equipped with a static mixer and a flush system.

PREPARATION OF THE SUBSTRATE

Depending on the application, drill holes with the correct diameter according to the type of injection needle, injection tube or packer or install the injection tubes in the correct position, according to the correct distance, length and the correct injection pattern (to be determined by the project engineer).

PREPARATION OF THE PRODUCT

Consult the technical and safety data sheets before the start of the injection works.

Stabilisation of railway ballast

Component A and Component B are mixed according to a 1:1 volumetric mixing ratio for this casting application. Make sure that both components are mixed homogeneous. Immediately pour the product onto the to be treated area.

Applications with 2 component injection pump

Open the packaging and insert a measuring rod in one of the components. This is to check the consumption of resin during the injection.

PREPARATION OF THE EQUIPMENT

Use a 2 component injection pump with a 1:1 volume ratio.

Attach the hoses with the correct length, depending on the application, to the pump and to the injection gun, equipped with a static mixer and flush system.

Check the pump.

Adjust the correct 1 to 1 mixing ratio.

Check the injection gun and the flushing system.

APPLICATION

Stabilisation of railway ballast

Immediately after mixing, pour the product on the to be treated area.

Applications with 2 component injection pump

SPETEC® SOIL N180 is injected with a one to one volume ratio, 2-component pump. A and B components must be kept separate at all times and supplied in separate hoses up to the injection gun. Flush the injection head with SPETEC® PUMP CLEANER through the flushing system every time the injection stop occurs to avoid blocking the injection gun.

FINISHING

Remove any remaining packers after the injection works and fill the remaining hole with a fast curing cement or other suitable material.

APPLICATION CONDITIONS

The recommended application temperature of the product is 20°C. The reaction slows down at lower temperatures.

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.

COMPLIMENTARY PRODUCTS

SPETEC® PUMP CLEANER

SPETEC® PACKERS & ACCESSORIES

CERMIPLUG

ADVICE / FOCAL POINTS

The static mixer must be long enough and have sufficient elements to obtain a correct mixing.

Without a flushing system, the injection gun will block after each injection stop.

TECHNICAL DATA**APPEARANCE - COMPOSITION**

SPETEC® SOIL N180 A COMPONENT (Appearance - Component A: brown liquid)		
Viscosity at 20°C	Brookfield SP4 - 200 rpm	± 500 mPa.s
Density at 20°C	EN ISO 2811-1	± 1,08 kg/dm ³

SPETEC® SOIL N180 B COMPONENT (Appearance - Component B: yellow liquid)		
Viscosity at 20°C	Brookfield SP4 - 200 rpm	± 300 mPa.s
Density at 20°C	EN ISO 2811-1	± 1,23 kg/dm ³

SPETEC® SOIL N180 mixed - not reacted (mix ratio at volume 1/1)		
Viscosity at 20°C	Brookfield SP4 - 200 rpm	± 400 mPa.s

REACTION TIMES

SPETEC® SOIL N180 mechanically mixed at 20°C (mix ratio at volume: 1/1)	
Start	End
25"	180"

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.

TECHNICAL DATA

SPETEC® SOIL N180 mixed - cured		
Density freely foamed	EN ISO 2811-1	± 90 kg/m ³

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

Fire class: DIN 4102-1 B3 ISO 3582 <125 mm

**PACKAGING**

SPETEC® SOIL N180	COMP. A	21 kg	Plastic cans	12 cans A + 12 cans B / pallet
	COMP. B	25 kg		

SPETEC® SOIL N180	COMP. A	210 kg	Steel drums	2 drums A + 2 drums B / pallet
	COMP. B	250 kg		

STORAGE AND SHELF LIFE

SPETEC® SOIL N180 A and B components should be stored in a dry area between +10°C and +30°C.

Shelf life: 12 months in the 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 safety data sheets 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: 9 August 2019 5:00 pm