

RASCOflex PU309F

POLYURETHANE INJECTION MATERIAL

POLYURETHANE INJECTION PRODUCTS

All RASCOflex polyurethanes in the PU309 series are solvent-free, 2-component, polyol- and isocyanate-based injection resins. All products undergo strict material tests, with particular priority given to their environmental compatibility.

The RASCOflex polyurethanes in the PU309 series excel by their high versatility and wide-ranging applications. The individual products in the series vary in terms of their standard preset gel time, foaming behaviour or thixotropic properties. To maximize flexibility on site and efficiently accommodate the constantly changing injection conditions, all standard RASCOflex PU309 products can be modified by additives, even during the injection works. It is thanks to this modularity that the RASCOflex PU309 series has evolved into a truly all-round system.

All products in the RASCOflex PU309 series are formulated so as to foam upon contact with water and thereby quickly halt the water flow. The polyurethane grout injected behind this then gels, without any contact with water, into a compact polyurethane mass. In its non-foamed state, the cured polyurethane body is rigid and tough-elastic.

USE

The key features of RASCOflex PU309F are its very short gel time and high foam factor. Due to the material's chemically induced foaming action, the final foam body achieves a rigid, closed-cell, permanently stable form.

RASCOflex PU309F is a polyurethane injection resin for the waterproofing and consolidation of dry to water-bearing soft ground, rock, concrete and masonry etc. Its very short gel time, relatively high viscosity and foaming reaction behaviour make it ideal for waterproofing against hydrostatic pressure under the most difficult conditions. Applications include sealing against water ingress into excavations, tunnels and hydraulic structures.

FEATURES

- very short gel time
- short setting time
- intense and rapid foaming of material (even without water contact)
- rigid foam structure with high compressive strength
- closed-cell foam body



Further product info



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LEGAL NOTICE: The information provided on the use and application of our products in this technical data sheet is based on the present state of our knowledge. The customer shall bear sole responsibility for the proper specification, application and use of the products in line with the intended purpose, project-specific conditions and external actions. The most recent technical data sheet shall apply. The current technical data sheets are available at www.rascor.com. Our General Terms of Business shall form an integral part of this technical data sheet.

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TECHNICAL/PHYSICAL DATA

	A-Comp Base component	B-Comp Base component
Supplied form	liquid	liquid
Material colour	slightly yellowish	brown
Container type	canister / cartridge	canister / cartridge
Standard container size *	19.8 ltr / 20.0 kg	19.8 ltr / 24.3 kg
Density (DIN EN ISO 2811)	1.01 kg/ltr (± 0.03)	1.23 kg/l (± 0.04)
Viscosity (DIN EN ISO 3219)	300 - 380 mPas	180 - 240 mPas
Hazardous goods/ADR	none	none

*Filling is controlled by weight balance. Volume details are indicative only and vary with temperature fluctuations.

Mix (ready-to-use)

Mixing ratio	1:1 (by volume)
Foam factor	Approx. 20-30-fold
Foaming start at 25 °C	approx. 10 s
Tack-free after (at 25 °C)	approx. 45 - 60 s
Application temperature	from +5 °C to +40 °C
Storage/shelf life	12 months, in original container at +10 °C to +25 °C, in dry conditions

The technical details are based on laboratory values from external and/or internal laboratory tests. These details are for information purposes only. The exact product values and their tolerances (e.g. temperature fluctuations ± 2 °C) are verified and approved on the basis of the test guidelines.

APPROVALS

- EN 1504-5 System 4
- REACH-assessed exposure scenarios: water contact, periodic inhalation, application
- REACH-tested raw materials, classed as harmless

EXPERT REPORTS

- Groundwater test report, MFPA Leipzig, Germany
- Model environmental product declaration available
- Further reports on request

SUPPLY/ADDITIVES

Item no.	Product	Container	Contents
1401.6351.001	RASCOflex PU309F canister set	set	44,3 kg
1101.6351.001	RASCOflex PU309F A-Comp	canister	20 kg
1101.6391.001	RASCOflex PU309 B-Comp	canister	24.3 kg
1101.6352.001	RASCOflex PU309F dual-chamber cartridge	cartridge	2 x 200 ml

Grouting machines, equipment and accessories available on request

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APPLICATION/PREPARATION

The A and B components are supplied in the correct, ready-to-use volumetric proportions. Grouting is performed using an injection pump. The components are separately fed, in the ratio 1:1 by volume, to a static mixer located immediately upstream of the injection point. The mixed components react to form a solid polyurethane resin mass.

Alternatively, where a dual-chamber cartridge is used, the components are mixed directly.

GENERAL GUIDELINES / SAFETY NOTICE

The gel and curing times are temperature-dependent. The reaction between the components is significantly influenced by the ambient, material, ground and groundwater temperatures. A minimum application temperature of + 5 °C should be observed for the individual components.

The components shall be properly blended into a homogeneous mix. For this purpose, a static mixer of min. 300 mm length should be used. As all RASCOflex polyurethane resins are moisture-sensitive, always ensure that the containers are properly sealed during storage.

As the B component is identical for the various RASCOflex PU309 systems, it does not need to be exchanged when switching systems.

MODIFICATION / ADJUSTMENT OF PRODUCT PROPERTIES

Additives can be used at any time, also directly on site, to tailor RASCOflex PU309 to the demands of the particular situation.

Gel time acceleration: RASCOflex PU-AC

Thixotropic agent: RASCOflex PU-THIX

To ensure correct dosage of the specific additive, please consult the relevant technical data sheet!

CLEANING OF WORKING EQUIPMENT

As the injection product reacts with water, no parts of the working equipment shall under any circumstances be cleaned with aqueous cleaning agents. Either machine oil or, in particular cases, acetone-based rinsing or cleaning agents are recommended for cleaning all equipment and accessories that have come into contact with polyurethane. Please consult the manufacturer's instructions for the relevant pumps and equipment.

DISPOSAL

For details on how to dispose of the individual components, please consult the product safety data sheet. Cured material, in moderate quantities, may be disposed of with normal domestic waste.



Mixing video