

RASCOflex PU112

POLYURETHANE INJECTION MATERIAL

POLYURETHANE INJECTION PRODUCTS

The tough-elastic PU resins are suitable for providing a solid, rigid waterproof barrier with enhanced compressive strength properties for cracks and joints in concrete elements, rock masses, masonry and soft ground. The tough-elastic PU resins are a combination of polyols, solvent-free isocyanates and special additives that have been tested and approved to DIN EN 1504-5 and DIN V 18028, including verification of performance as a structural ("force-transmitting") injection product. All RASCOflex PU products undergo strict material tests, with particular priority given to their environmental compatibility.

USE

RASCOflex PU112 is a tough-elastic polyurethane resin mix that can be injected either as a 2-component system or in premixed form as a 1-component system. Thanks to its good adhesion to joint/crack/void faces, even to damp/wet bases, RASCOflex PU112 is primarily specified where, apart from providing a waterproof barrier, "force-transmitting" properties are also required to strengthen the structural fabric. The low viscosity of the mix (A + B) ensures full grouting of the void down to openings of 0.3 mm. Depending on the irregularities (interlock) in the joint or crack face, even smaller openings can be successfully waterproofed.

RASCOflex PU112 was developed and formulated so as not to foam in the joint or crack, thereby creating a continuous, solid and permanent waterproof barrier. However, material escaping during the injection process may foam slightly at the surface. This effect is particularly advantageous where RASCOflex PU112 is injected in the rear part of the joint or crack so as to force material into the ground where, depending on the situation, it can expand and provide a generous seal to the joint or crack on the outside.

FEATURES

- very high environmental compatibility
- for structural bonding of concrete elements
- for combined waterproofing and consolidation
- resin with very high compressive strength
- individually controllable gel time
- high ground permeation



Further product info



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TECHNICAL/PHYSICAL DATA

	A-Comp Base component	B-Comp Base component
Supplied form	liquid	liquid
Material colour	greyish	brown
Container type	canister	canister
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/ltr (± 0.04)
Hazardous goods/ADR	none	none

Mix (ready-to-use)

Mixing ratio	1:1 (by volume)
Setting time (DIN EN ISO 196-3)	approx. 50 min
Flexural tensile strength in concrete crack (DIN EN ISO 196-1)	approx. 15.2 N/mm ²
Compressive strength (DIN EN 12190)	approx. 63 N/mm ²
Tensile strength development (DIN EN 1543)	approx. 3.0 N/mm ² / 72 h
Adhesion by tensile bond strength (DIN EN 12618-2)	approx. 3.5 N/mm ²
Application temperature	from +5° C to +35° 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 2+: ZA.1a U(F1) W(3) (1/2/3/4) (5/40) (0)
- DIN V 18028
- REACh-assessed exposure scenarios: water contact, periodic inhalation, application
- REACh-tested raw materials, classed as harmless

EXPERT REPORTS

- Impact on groundwater hygiene in accordance with DIBt (German Institute for Construction Technology) guidance paper, Institute of Environmental Hygiene and Environmental Medicine, Gelsenkirchen, Germany
- Determination of characteristic values, MFPA Leipzig, Germany
- Flexural tensile and compressive strength, University of Duisburg-Essen, Germany
- Beam test, University of Essen
- Further reports on request

SUPPLY/ADDITIVES

Item no.	Product	Container	Contents
1101.6251.001	RASCOflex PU112 A-Comp	canister	20.0 kg
1101.6252.001	RASCOflex PU112 B-Comp	canister	24.3 kg
1101.6251.002	RASCOflex PU112 A-Comp	canister	10.0 kg
1101.6252.002	RASCOflex PU112 B-Comp	canister	12.2 kg
1101.6911.001	RASCOflex PU-AC	canister	5 kg
1101.6921.001	RASCOflex PU-THIX	canister	5 kg
1101.6931.001	RASCOflex PU-FO	canister	5 kg

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. Polymerization results in the formation of a polyurea.

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.

MODIFICATION / ADJUSTMENT OF PRODUCT PROPERTIES

Additives can be used at any time, also directly on site, to tailor RASCOflex PU112 to the demands of the particular situation.

Gel time acceleration: RASCOflex PU-AC

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

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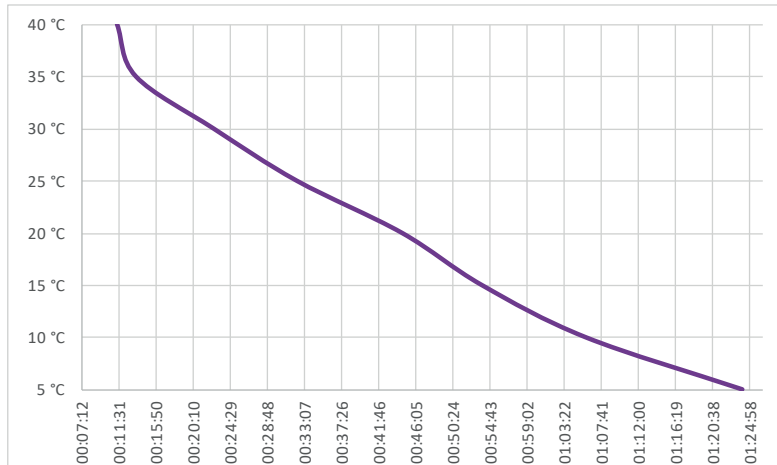


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GEL TIME FOR STANDARD PRODUCT

Gel time in minutes, in function of material/building fabric temperature



Temp.	Standard
40 °C	00:11:24
35 °C	00:13:35
30 °C	00:22:37
25 °C	00:32:17
20°C	00:44:31
15 °C	00:53:48
10 °C	01:05:52
5°C	01:24:05

Times in (hh:min:sec)

Guide values from laboratory tests!

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