TECHNICAL
DATA SHEET

RASCOflex US509F

UREA-SILICATE INJECTION MATERIAL

SM

UREA-SILICATE INJECTION PRODUCTS

RASCOflex US urea-silicate resins are reactive, solvent-free, two-component resin systems based on modified water glass and isocyanate. Both the compactly cured, bubble-free version and the foamed form exhibit high adhesive strength. The curing behavior remains unchanged during injection in both dry and wet environments. Nevertheless, the injected resin can be mechanically processed well. Due to the relatively high water glass content, silicate resins have excellent properties in fire behavior and against chemical influences, especially in comparison to polyurethane systems.

USE

RASCOflex US509F is a highly reactive, heavily foaming, solvent-free 2-component urea-silicate resin system.

RASCOflex US509F is a heavily foaming injection resin for the consolidation and stabilization of soft ground of soft ground, gravels, fissures and generally unstable ground and rock formations. Other applications include void filling in tunnels, drains, sewers, canals, hydraulic structures and special geotechnical works.

FEATURES

- fast-reacting resin, rapid foaming, high flexibility
- compressible foam
- also foams in the absence of water
- high chemical stability
- high adhesion to void faces, even on wet surfaces
- low flammability
- mainly closed-cell end product

Further product info

swiss safety center ISO 14001 certified system

swiss safety center ISO 9001 certified system

CE

EN G 13.01.2026

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TECHNICAL / PHYSICAL DATEN

	A-Component	B-Component
Supplied form	liquid	liquid
Material colour	colourless	dark brown
Container type	canister	canister
Container size	21,5 ltr/29 kg	21,5 ltr/26,6 kg
Viscosity (DIN EN ISO 3219)	180 - 260 mPas	150 - 250 mPas
Density (DIN EN ISO 2811)	1,35 kg/ltr (± 0,04)	1,24 kg/ltr (± 0,04)
Flash point (DIN 53213)	> 230 °C	> 230 °C
Hazardous goods/ADR	none	none

	A:B Mix
Mixing ratio	1:1 (by volume)
Foam factor	approx. 30-fold
Foam density	approx. 45 kg/m³
Foaming start at 23 °C	20 s (± 10 s)
Foaming end at 23 °C	40 s (± 15 s)
Application temperature	from +4 °C to +40 °C
Storage/shelf life	12 months in original container, from +15 °C to +35 °C, in dry conditions

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

APPROVALS

- REACh-assessed exposure scenarios: water contact, periodic inhalation, application
- REACh-tested raw materials, classed as harmless

EXPERT REPORTS

- Impact on groundwater hygiene, Institute of Environmental Hygiene and Environmental Medicine, Gelsenkirchen, Germany

SUPPLY/ADDITIVE

Item no.	Product	Container	Contents
1401.7211.001	RASCOflex US509F canister set	set	40 l
1107.7211.001	RASCOflex US509F A-Comp	canister	29 kg
1107.7212.001	RASCOflex US509F B-Comp	canister	26,6 kg
1101.7211.002	RASCOflex US509F A-Comp	canister	27 kg
1101.7212.002	RASCOflex US509F B-Comp	canister	24,8 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. The canisters shall be briefly shaken prior to use. 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 silicate resin foam. The A component freezes at sub-zero temperatures and, in such cases, shall be fully thawed out prior to application.

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 +15° 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 shall be used.

Suitable protective clothing, gloves and goggles shall be worn. An eyewash bottle shall be kept at hand. For further details, please consult the safety data sheet.

DISPOSAL

Consult the material safety data sheet for disposal of the individual components. The reacted material can be disposed of with regular household waste in moderate amounts.

Mixing video

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