

Mineral Fill

Product code: SIL 2C

Product specification: Organo-Mineral Silicate Foaming Resin

Category: Urea-silicate

Introduction

Mineral Fill is a 2-component, fast reacting, strongly expanding silicate foam. It is suitable for cavity filling, ground stabilization (for heavily cracked rock mass and soil) gas sealing and water stopping.

- High foaming injection resin
- Very low viscosity of the components
- Very low starting viscosity after component mixing
- Cured resin is easy to cut and drill through
- Doesn't react with water and water doesn't affect material properties
- Excellent corrosion resistance

Components

	Unit	Mineral Fill comp. A	Mineral Fill comp. B
Appearance	-	Colourless liquid	Dark brown liquid
Density at 20 °C	g/cm ³	1.28±0.05	1.21±0.05
Viscosity at 25 °C	mPa*s	25±10	150±50
Viscosity at 10 °C	mPa*s	35±10	350±50

Material properties

	Unit	25 °C	10 °C
Foam Factor	-	40±10	20±5
Viscosity after mixing (A+B)	mPa*s	200±50	400±50
Reaction Start Time	s	10 - 20	25 - 65
Reaction End Time	s	40 - 50	55 - 85
Max. Reaction Temp.	°C	< 90	< 90

* Results obtained under laboratory conditions.

Application

The components Mineral Fill A and Mineral Fill B shall be pumped using a two-component pump as commonly used in the mining and tunnelling industry with a volumetric ratio of 1:1. It is recommended to use a static mixer of the type: M-10x360 (part no. M-10x360) or an equivalent.

Components mixing ratio:

	Mineral Fill comp. A	Mineral Fill comp. B
by volume v/v	100	100
by weight m/m	105	100

If components A and B are mixed at a different ratio, the reaction time and mechanical properties may deviate from specifications as above.

Cleaning of the Injection Pump and Accessories

The cleaning of the application equipment must be carried out thoroughly with great attention. Pumping system, valves, mixing equipment and hoses must be cleaned immediately after the injection process has been completed. Thoroughly rinse the components that have not yet been reacted with a gasket-friendly cleaner, change the cleaning liquid several times during each cleaning process and collect it for disposal. Reacted resin can only be etched and mechanically removed. To be sure, read the technical description of the injection pump and the data sheet of the cleaner used, carefully. Please refer to the pump manufacturer's operating manual for detailed instructions..

Packaging

Type of packaging	Component	Weight kg	Shipping code
Plastic container	A	30	MF-A-25P
	B	28	MF-B-25P
Metal container 20 l	A	25	MF-A-20M
	B	23.5	MF-B-20M
Metal drum 200 l	A	250	MF-A-200M
	B	235	MF-B-200M
IBC container 1000 l	A	1290	MF-A-1000
	B	1220	MF-B-1000

Other packaging possible on the request.

Transport and storage

Both resin components are delivered in canisters - made of plastic or sheet metal - (other packaging is possible on request). The recommended storage in dry and airy rooms, at a storage temperature of 10 °C to 30 °C. The guaranteed shelf life from the date of manufacture is 12 months for Mineral Fill A component and Mineral Fill B component only in unopened original packaging.

Tests and approvals

The system meets the German mining approval standards according to the Arnsberg District Government Department 6 Mining and Energy/ NRW-Requirements:

1. Reaction to the fire, ignitability of the products subjected to the direct impingement of flame, according to PN-EN ISO 11925-2:2010. IMBiGS Katowice, Poland, July 2019.
2. Reaction temperature and flash point. OBAC, Poland, July, 2019.
3. Determination of the Burning behaviour by Oxygen Index. Central Mining Institute, Poland, July 2019.
4. "Examination of an elution behaviour of the silicate-based injection resin" Ecotoxicological effects investigation on ground water. MFPA Leipzig GmbH, Germany, October 2018.

Environment and safety instructions

Empty containers can be disposed only via authorized companies, subject to their terms and conditions. The materials cannot be returned to the production site or to the distribution depots. Remnants of the material can be disposed via local authorized companies in line with applicable environmental regulations. Please refer to the safety data sheets (MSDS) for more information on the disposal of remaining leftovers, as well as of empty containers.

Product must be applied in strict compliance with all applicable protective regulations and with the Material Safety Data Sheets (MSDS) issued by DSI Schaum Chemie. According to Annex II of EU Regulation 1907/2006, safety data sheets must be available to all persons responsible for occupational safety, health protection and for handling of the materials. Product application and cleaning of the equipment may only be carried out in protective clothing with safety gloves and goggles. According to current knowledge, the use of a suitable skin protection cream is recommended. Skin contamination must be cleaned with soap and water. If splashes get into the eye, rinse eyes with copious amount of water and consult a doctor. The components or mixed material must not be allowed to enter sewage systems or the ground.

Liability disclaimer

The information in this leaflet is based on our knowledge and experience at the time of printing, as stated above. Therefore, please make sure that you always use the latest version hereof. The general description of product use in this leaflet cannot take into consideration special conditions and circumstances that may arise in individual cases. Therefore, please check our product in each case for its suitability for the specific application before use. The application, use and processing of our product are naturally beyond our control. They are therefore exclusively the responsibility of the customer, as is the processing result achieved on the basis of our technical application information. The applicator is responsible for checking whether the product in question is suitable for the specific application in each case of use.

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