Product Information

Dolit FQS

FM.FU.001 | 04/07/2024

PRODUCT GROUP

Jointing compounds - synthetic resin

BINDER BASE

Furan resin, aldehyde-free

PROPERTIES / APPLICATION

Groutable mortar mass based on a modified furan resin with a carbon-containing filler for easy grouting of acid-resistant ceramic tiles, bricks or carbon bricks using the slurry method.

Due to its very good chemical resistance, especially to solvents and basic chemicals, Dolit FQS is the product of choice for jointing tile linings that are subject to high thermal and chemical loads.

- Temperature resistance
  - Up to 180 °C
  - The temperature resistance is basically dependent on the individual chemical stress.
- Very high chemical resistance to a wide range of media, such as various inorganic and organic acids and alkalis, greases, oils and fuels.
- Excellent adhesion to ceramic tiles, bricks or carbon bricks.
- Electrically conductive (see **Testing the electrostatic dissipation capability [▸ 4]**).

SYSTEM DESIGN

Dolit FQS Mortar mass

PHYSICAL DATA

Physical property	DIN	ASTM	Value	Unit
Density	DIN EN ISO 1183-1		1.58	g/cm³
Compressive strength [1]		ASTM C 579	100	MPa
Ground dissipation resistance	DIN EN 14879-6 At >70% relative humidity		≤ 10^6	Ω

PRECONDITIONS

The temperatures for the substrate, ambient air and Dolit materials must be between 10 °C and 30 °C during application. The optimum processing temperature is 20 °C. Higher and lower temperatures affect the working time and consistency of the composition. Consumption and application performance may change as a result.

During application, the substrate must be kept absolutely dry. No moisture (condensate, mist, etc.) may get onto the surfaces to be protected.

[1] Mean value, determined on annealed samples.

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Unevenness must already be levelled out in the substrate.

Distance to dew point has to be at least 3 K, at a relative humidity of above 70 % at least 5 K.

The construction site must be protected from draught and direct sunlight.

The tiles should not have any edge chamfers, as chamfers can cause an uneven joint pattern. The tiles must be laid in such a way (fully embedded) that migration behind and caking of the joint compound is avoided.

The hollow-joint tiling must be clean, dry and chemically neutral. The side surfaces of the tiles must be free of mortar material.

The open joint should have a rectangular cross-section, the width should be 5 to 7 mm and the depth 10 to 40 mm. From a depth of 20 mm, slurry must be applied twice.

The slope of the paving must be < 3%. For larger slopes jointing must be carried out using a joint injector with suitable mortar.

Before the slurry is applied, the tile lining must be treated with Dolit Protective Varnish. The repulsion behaviour of the protective coating as well as the joint pattern and the appearance of the tiles after jointing must be tested on a test surface before.

DELIVERY FORM / BEST BEFORE DATE

Component	Item no.	Quantity	Package	Months
Dolit-FQS-Solution	5233023001	25 kg	Hobbock	24
Dolit-Filler FQS	5233040002	20 kg	Bag	24

- All components must be stored and transported in a dry and frost-free place.
- The minimum shelf life applies to a storage temperature of 20 °C. Higher temperatures shorten, lower temperatures extend the minimum shelf life.

Safety notice

- For handling, storage and transport, observe the relevant safety data sheets!

WORKING EQUIPMENT

NOTE! **The materials to be processed can have an aggressive effect on mixing and processing tools due to the solvents, acidic, alkaline or abrasive components they contain. Therefore, please use only suitable tools for mixing and processing.**

Measuring cup	Drilling machine	Joint board (rubber chip)
Scale	Anchor stirrer	Spatula
Mixing vessel	Trowel	

GISCODE

Product	GISCODE
Dolit FQS Mortar mass	SB-F10

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MIXING RATIO / CONSUMPTION

MORTAR MASS TO BE APPLIED BY SLURRY

DOLIT FQS MORTAR MASS

Component	kg/litre	Part by weight	kg/batch	Litres/batch
Dolit-FQS-Solution	0.635	1.0	5.700	5.000
Dolit-Filler FQS	0.945	1.5	8.500	9.500
Total	**1.580**	**2.5**	**14.200**	

Volume per batch	≈ 9 l Mortar mass
Joint width	5 – 7 mm
Joints depth	10 – 40 mm

MIXING / APPLICATION

Processing may only be started when the application requirements are met and can be maintained during the entire processing and curing.

MIXING SEQUENCE

- At high ambient temperatures, mix smaller quantities of mortar mass to avoid a strong exothermic reaction of the mixture.
- Stir the solution well with an anchor stirrer (300 - 500 rpm) before use or partial withdrawal. Move the stirrer past the vessel wall and bottom.
- Solids are measured or weighed out individually, added to the solution in portions and mixed in carefully until a lump-free mixture is obtained.
- Smaller quantities can be mixed by hand.
- Do not use the mortar mass after the working time has expired.

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APPLICATION

- Protection of the tile surface with Dolit Protective Varnish. The standard application is carried out with Dolit Protective Varnish Primer + 2 layers Dolit Protective Varnish A. It must be checked on a project-by-project basis whether a third layer Dolit Protective Varnish A is required.
- The mortar mass is drawn over the tile surface diagonally to the course of the joint with the joint board (rubber chip).
- The joints must be filled to the brim.
- As little mortar mass as possible should remain on the tile surface.
- From 20 mm joint depth, apply two joint compound. Wait between the two slurry coats until the surface has hardened sufficiently to be walked on. Carry out the second slurrying operation as quickly as possible to ensure that the Dolit Protective Varnish can be removed the following day after its application.
- For larger areas and required connections, finish slurrying 2 - 3 rows of boards before the surface treated with Dolit Protective Varnish ends. When connecting, the new Dolit Protective Varnish to be applied is rolled up over the strip with the already applied Dolit Protective Varnish.
- Expansion joint flanks must be prepared either by a cut or by a suitable expansion material.

Once the mortar mass has hardened, the Dolit Protective Varnish has to be removed from the surface of the tiles by a spatula. The removing must take place not later than the day after the application of Dolit Protective Varnish. A short, preferably sharpened spatula should be used for the removal.

Dolit Protective Varnish can be slightly warmed up to facilitate removal in stubborn cases.

POT LIFE

- At 20 °C the pot life is approx. 35 min.
- The pot life depends on the temperature.
- Higher temperatures shorten it, lower temperatures prolong it.

WAIT- / CURING TIME

- Curing time until complete chemical and mechanical resistance (at 20 °C) at least 5 days.

CLEANING

Tools that are soiled with uncured materials can be cleaned with Dolit-Universal-Cleaner. Clean only in well ventilated areas and observe safety measures.

TESTING THE ELECTROSTATIC DISSIPATION CAPABILITY

Tile flooring needs to be cleaned before the test. There must be no insulating layers.

The test takes place at the construction site and is carried out at the earliest 8 days after installation.

The measurement of the ground dissipation resistance R_E for testing the dissipation capability is carried out in accordance with DIN EN 14879-6 and is performed using a commercially available resistance meter up to 10^8 ohms with 100 volts DC as the measuring voltage. A circular electrode with a diameter of 50 mm is used as the measuring electrode. As a contact mediator, a 50 mm diameter flow paper slightly moistened with tap water is placed on the surface of the tile. During the measurement, a force of approx. 10 N is applied to the base.

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For tile linings with non-electrically conductive ceramic tiles, measurements are taken in the area of the joint. Particular care must be taken to ensure that there is uninterrupted contact between the electrode, contact mediator and joint during the measurement.

For non-conductive tiles, the panel size must not exceed the following dimensions to ensure dissipation capability across the joint material:

- For rectangular tiles 115 x 240 mm
- For square tiles 150 mm x 150 mm

SAFETY / DISPOSAL

- Ensure sufficient ventilation, especially when working in closed rooms, pits or containers.
- Observe fire and smoking ban.
- Observe safety data sheets, hazard statements and safety advice on the containers.
- Wear prescribed personal protective equipment. Avoid skin contact with the materials.
- Clean and care for hands with skin protection soap and ointment. Do not use solvents.
- Wear a dust mask during grinding work, e.g. repairs.
- Follow operating instructions according to §14 GefahrstoffV and Technical Rules for Hazardous Substances TRGS 507.
- Comply with the accident prevention regulations of the employers' liability insurance associations.
- Avoid direct contact of the materials with the flame, especially when welding, watch out for welding beads.
- Preferably consume residual quantities.
- Do not pour residues down the sink or into the dustbin.
- Collect residues for disposal separately in durable, sealable and labelled containers.

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