

HEGSEL FU 633

Two-Component Furan Resin Mortar

Description:

HEGSEL FU 633 is primarily a bedding and jointing mortar for fixing acid-proof bricks and tiles in tropical climates (20 - 40°C). It is provided in two-component format, a Furan solution and a catalysed mineral filler powder.

Applications:

HEGSEL FU 633 is recommended as a jointing and bedding mortar in most applications where strong acid/alkali materials are present, in particular for general tiling / masonry work and for trenches, pits and storage areas. As **HEGSEL FU 633** is also impervious, it is ideal for fixing linings in holding vessels. It can be used in conjunction with glass cloth and mats, to build up an in-site tank lining.

Advantages:

In addition to its excellent chemical resistance, **HEGSEL FU 633** is a fast setting product, with impressive mechanical properties. It also offers impressive resistance against solvents and organic compounds. It is a furfural – free composition. It can be used for operating conditions up to 180°C.

Chemical resistance:

Information on the chemical resistance is available on request. **HEGSEL FU 633** will not withstand fluorine-based acids and salts, and some strong oxidizing acids, carbon-filled Furan-base mortar is recommended for these applications.

Pot life:

Product	5°C	10°C	20°C
HEGSEL FU 633	ca. 60 min	ca. 40 min	ca. 25 min

An initial set occurs approximately 4 hours after mixing, with a full chemical cure occurring after 48 hours. Mortar should never be exposed to water, steam or chemical environments before the mortar is completely cured.

Note: Do not mix more material than required by pot-life. It cannot be reconstituted. Never add unapproved materials to the mix, in particular water. After mixing spread out on to a flat surface (eg the lid of a 200L metal drum) to avoid self – generated heat. Large mixed volumes that are not spread out will flash set, becoming extremely hot and producing smoke. The flat surface should be cleaned after each batch mix.

Packaging:

The products are supplied in the following standard package sizes:

Product	Size
HEGSEL FU 633 SOLUTION	25 kg in 25L UN drums (24 per pallet)
HEGSEL FU 633 POWDER	25kg lined polyweave bags (40 per pallet)

Storage:

The products must be stored in a cool, dry and frost-free place, away from direct sunlight. At the specified storage temperatures, a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
HEGSEL FU 633 SOLUTION	≤ +25°C	12 Months
HEGSEL FU 633 POWDER	≤ +25°C	12 Months

Do not store a combined stack of solution and powder components. Accidental leakage could lead to flash setting of material, producing smoke.

1. Surface preparation

For all pre-existing surfaces of metal or concrete, abrasive blast or scarify to remove all laitance and surface contaminants. Due to catalyst components of the **HEGSEL FU 633** mortar, a primer base should be applied before application. Furan should never be applied directly onto concrete as this can lead to an insufficient setting process. The surface should be dust-free and dry and the ambient temperature should be above the dew point of air. Prepare the substrate with epoxy primer to ensure an adequate bond with the **HEGSEL FU 633**. For new-build concrete constructions, a damp tolerant primer is recommended and can be applied within 48 hours of concrete set, potentially expediting any construction schedule. **HEGSEL FU 633** mortar can then be applied once priming has been completed.

2. Environmental conditions

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

3. Application

The mortar comprises a solution and a catalysed powder. Nominal mortar joints of up to 4 mm are recommended. Values are an intended guide.

HEGSEL FU 633	Parts by Weight (kg)
HEGSEL FU 633 SOLUTION	100
HEGSEL FU 633 POWDER	400

Using an inclined mixer or paddle mixer, place the powder in mixing vessel and add the solution. Mix thoroughly for at least 3 minutes; the powder will 'wet' out to a mortar.

Application should be made with either float or trowel to all jointing surfaces to ensure a complete chemical barrier. All tools and equipment should be cleaned off with solvents and damp cloths to ensure their continued use. If any mortar has spread over on to the tiles or bricks and a tidy clean finish is required, rub the tiles or bricks, with a damp cloth before setting takes place. After setting, it will be impossible to clean off any overspill mortar.

4. Consumption

For Bedding and jointing (4 mm)

Material	Sizes [mm]	Coverage [kg/m ²]
Bricks	230 × 114 × 75	ca. 22.5
Bricks	230 × 114 × 65	ca. 25
Tiles	230 × 114 × 50	ca. 12.5
Tiles	230 × 114 × 38	ca. 11.3
Tiles	230 × 114 × 20	ca. 10

Values are approximate requirements.

5. Safety measures

Safety data information available on request. Adequate ventilation must be provided whilst work is in progress and is compulsory for closed or indoor applications. The instructions on storage, fire and explosion are to be observed. No releases to the sewers or drains are to be permitted under any circumstances. Always refer to MSDS data sheets for hazard and transport information.

Technical Data	Unit	Value
Density	kg/m ³	1985
Specific Volume	m ³ /tonne	0.5
Tensile Strength	kg/cm ²	84
Compressive Strength	kg/cm ²	387
Flexural Strength	kg/cm ²	178
Bond strength (wire cut bricks)	kg/cm ³	28
Coefficient of expansion	10 ⁻⁶ °C	14.4
Water absorption	%	0.2
Maximum Operating Temperature	°C	188

HEGSEL FU 633; 0.00/10.12.2020. All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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