

# HEGSEL FU 632

2-C-furan resin mortar with carbon fillers

**Description:**

**HEGSEL FU 632** is a black, two-component, cold curing synthetic resin mortar, based on a modified furan resin with carbon fillers.

**Characteristics:**

- The hardened mortar is electric conductive
- High chemical resistance against acids, alkalis and certain solvents
- High temperature resistance
- Lower shrinkage than other furan resins
- Low odour
- Long shelf life even at higher temperatures, therefore also suitable in tropic regions

**Applications:**

**HEGSEL FU 632** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

**Chemical resistance:**

Information on the chemical resistance is available on request.

**Substrate:**

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

**Pot life (20°C):**

Product	Time (min)
HEGSEL FU 632	ca. 60

**Curing (20°C):**

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 2 Days

**Packaging:**

The products are supplied in the following standard package sizes:

Product	Size	Article No.
HEGSEL Pox 414 SOLUTION	20 kg	17761815
HEGSEL Pox 414 HARDENER	8 kg	17761845
HEGSEL FU 632 SOLUTION	20 kg	17760240
HEGSEL FU 632 SOLUTION	1000 kg	17760246
HEGSEL FU 632 POWDER	25 kg	17760210
Cleaner E-200	4 kg	17701830
Cleaner E-200	8 kg	17701833

**Storage:**

The products must be stored in a cool and dry 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 Pox 414 HARDENER	≤ +25°C	24 Months
HEGSEL Pox 414 SOLUTION	≤ +25°C	24 Months
Cleaner E-200	5-25°C	60 Months
HEGSEL FU 632 SOLUTION	≤ +30°C	24 Months
HEGSEL FU 632 POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

## 1. Surface preparation

Steel and concrete surfaces must be primed with **HEGSEL Pox 414** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **HEGSEL FU 632** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

## 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 execution of the brick lining work is only permitted, if the requirements of "Surface Preparation" and "Environmental Conditions" are met.

**HEGSEL FU 632** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **HEGSEL FU 632**.

The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

## 4. Work tools

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

## 5. Mixing ratio

Pour **HEGSEL FU 632 SOLUTION** in a mixing vessel and add **HEGSEL FU 632 POWDER** at the specified mixing ratio. The stirring of the merged components

should be at least 3 minutes and must result in a homogeneous mixture.

PRIMER	Parts by Weight (kg)	Parts by Volume (Liter)
HEGSEL Pox 414 SOLUTION	100	2.00
HEGSEL Pox 414 HARDENER	40	0.81

HEGSEL FU 632	Parts by Weight (kg)	Parts by Volume (Liter)
HEGSEL FU 632 SOLUTION	100	2.00
HEGSEL FU 632 POWDER	167	5.65

## 6. Consumption

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Size (mm)	Coverage (kg/m <sup>2</sup> )
Tiles	240 x 115 x 20	ca. 12
Tiles	240 x 115 x 40	ca. 15
Bricks	240 x 115 x 65	ca. 19
Bricks	240 x 115 x 80	ca. 21

## 7. Commissioning

Brick linings with **HEGSEL FU 632** should be taken in operation at earliest 1 week after completion.

## 8. Cleaning

Clean all equipment with **Cleaner E-200** immediately after use. The cleaning is done while the material is still not hardened.

## 9. Safety measures

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 × 10 <sup>8</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	16
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.6
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	52
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	5
Max. Operating Temperature Dry	-	°C	+ 230

**Note:** The indicated temperatures are dependent on the present load and may vary

**HEGSEL FU 632**; Revision No: 1.00 / Last Revision Date: 20.10.2020

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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