

HEGSEL PL 620

2-C-phenol resin mortar with carbon fillers

Description: **HEGSEL PL 620** is a black, two-component, cold curing synthetic mortar based on a modified phenol resin with carbon fillers.

- Characteristics:**
- Excellent adhesion to ceramic and carbon bricks
 - Extremely high chemical resistance, especially to acids, solvents and weak oxidizing chemicals
 - The hardened mortar conducts electricity
 - Suitable for linings, where a pre-stressing must be achieved

Applications: **HEGSEL PL 620** 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 PL 620	ca. 50

Curing (20°C):

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 8 Days

Packaging: The products are supplied in the following standard package sizes:

Product	Size	Article No.
HEGSEL Pox 414 HARDENER	8 kg	17761845
HEGSEL Pox 414 SOLUTION	20 kg	17761815
HEGSEL PL 620 SOLUTION	20 kg	17760060
HEGSEL PL 620 SOLUTION	1000 kg	17760066
HEGSEL PL 620 POWDER	25 kg	17760030
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
HEGSEL PL 620 SOLUTION	≤ +20°C	9 Months
HEGSEL PL 620 POWDER	-	24 Months
Cleaner E-200	5-25°C	60 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 PRIMER** 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 PL 620** 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.

Non-alloyed 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/mm². 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 PL 620 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 PL 620**.

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 PL 620 SOLUTION** in a mixing vessel and add **HEGSEL PL 620 POWDER** at the specified mixing ratio. The stir-ring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

HEGSEL PL 620 SOLUTION tends to separate water during storage. If there is a water film on top, it is necessary to skim it first before use. Do not mix the water into the solution.

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

HEGSEL PL 620	Parts by Weight (kg)	Parts by Volume (Liter)
HEGSEL PL 620 SOLUTION	100	2.00
HEGSEL PL 620 POWDER	180	7.33

6. Consumption

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

Material	Sizes (mm)	Coverage (kg/m²)
Tiles	240 x 115 x 20	ca. 10
Tiles	240 x 115 x 40	ca. 13
Bricks	240 x 115 x 65	ca. 16
Bricks	240 x 115 x 80	ca. 18

7. Post treatment

Brick linings with **HEGSEL PL 620** should be taken in operation at earliest 8 days after finishing. The optimum resistance to solvents and alkalis will be achieved after several weeks at room temperature. This process can be accelerated by a thermal treatment of the finished floor or brick lining.

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	EN ISO 1081	Ω	≤ 1 × 10 ⁸
Flexural Strength	EN ISO 178	N/mm ²	22
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm ³	1.53
Compressive Strength	EN ISO 604	N/mm ²	50
Hardness Shore D	-	-	ca. 60 - 70
Thermal Conductivity	-	W/(m.K)	1.6
Tensile Strength	EN ISO 527	N/mm ²	8
Max. Operating Temperature Liquids	-	°C	+ 180

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

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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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