

HEGSEL® Flex 588

Flexible Broad Range Chemical Resistant Floor Coating System

You Build, We Protect!

Description:

HEGSEL Flex 588 is a high-performance polyurethane-based coating system that provides an elastic barrier specifically engineered to protect concrete and steel substrates subjected to chemical and mechanical stress. Upon curing, the system delivers a uniform, smooth, and monolithic surface optimized for environments with heavy forklift traffic. Its robust formulation ensures excellent durability, making it ideal for industrial applications demanding superior floor protection especially in high mechanical load areas. Exposure to UV light can cause the coating surface to become matte or discolored.

Characteristics:

- Self-leveling for uniform application on floors
- Provides a smooth surface finish
- Seamless and jointless application
- Suitable for heavy forklift traffic
- Optional slip-resistant version available
- Excellent thermal resistance

Pot Life:

Temperature	Pot Life
5°C	Approx. 90 minutes
20°C	Approx. 30 minutes
35°C	Approx. 10 minutes

Note: Depending on the actual ambient temperature, the pot life may vary. Higher temperatures could shorten the pot life, while lower temperatures would prolong it. For further information, please consult HEGSEL!

Waiting Time Between Layers:

Product	Waiting Time
HEGSEL Pox 406 Primer (15°C / 20°C / 35°C)	min. 12 hrs / 8 hrs / 6 hrs Max. 48 hrs at 20°C
HEGSEL Flex 586 (5°C / 20°C / 35°C) (Also fillings / trowellings and undercoat for subsequent tiles / bricks)	Wall: min 5 hrs, 3 hrs, 1.5 hrs Floor: min 24 hrs, 12 hrs, 5 hrs Max. 24 hrs at 20°C

Note: Subsequent layers after applying **HEGSEL Flex 588 Top Coat** can be applied once solidification from the chemical reaction permits further work.

Note: If the maximum waiting time is exceeded, please consult HEGSEL!

Curing Time Schedule:

HEGSEL Flex 588 System	Time
Walkable (5°C / 20°C / 35°C)	24 hrs / 12 hrs / 5 hrs
Fully Cured / Chemical and Mechanical Load (20°C)	Approx. 7 days

Note: Curing times for wall areas are the same as for floor areas. Foot traffic support must be considered.

Packaging / Storage:

Product	Package Size	Shelf Life (20°C)
HEGSEL Pox 406 Solution	9.2 kg Drum	24 Months
HEGSEL Pox 406 Hardener	5 kg Drum	24 Months
HEGSEL Pox 406 Additive	1.25 kg Can	12 Months
HEGSEL Flex 586 Solution 1 (RAL 1001, 6002, 7030, 7031, 7032)	6 kg Drum	24 Months
HEGSEL Flex 586 Solution 2	2.4 kg Can	6 Months
HEGSEL Flex 588 Solution 1 (RAL 1001, 6002, 7030, 7031, 7032)	6 kg Drum	24 Months
HEGSEL Flex 588 Filling Powder	25 kg bag	24 Months
HEGSEL Filler 40	25 kg bag	24 Months
HEGSEL Flex 588 Powder	22 kg bag	24 Months
HEGSEL Filler 90	5 kg / 10 kg bag	24 Months

Note: Other colors are available upon request.

The products must be stored in a secure, cool and dry place, away from direct sunlight. The solution part must be frost-free. If the shelf life is passed, the materials must be tested prior to use. Higher temperatures by storage and transport would reduce the shelf life, whereas lower temperatures would extend the minimum shelf life. The containers are to be kept closed tightly. All liquid products must be stored in frost-proof conditions. Packaging that may have been damaged during transport must be transferred to alternate containers.

1. Surface Preparation

Concrete

Refer to DIN EN14879-1.

To achieve adequate adhesive tensile strength, the substrate must generally be pretreated to be free of cement slurry, cement skin, loose and crumbly particles, structural imperfections, separating substances, and contaminants such as oil or grease. The residual moisture of concrete substrates must not exceed 4%.

2. Environmental Conditions

The specified environmental conditions must be complied with during surface preparation. During the application, the substrate must be kept completely dry. No moisture (condensate, mist, etc.) may get onto the surfaces that are to be protected. Uncured material has to be protected from any kind of moisture. The construction site has to be protected against direct sunlight, rainfall and draught.

Environmental Conditions	Value
Substrate Temperature	approx. 10 - 35°C
Ideal Working Temperature	approx. 15 - 25°C
Optimal Working Temperature	20°C
Lowest Working Temperature	5°C
Dew Point Distance	min 3°C (At a relative humidity of above 70 % at least 5°C)

Elevated or decreased temperatures could affect the working time and consistency of the mixture. As a result, consumption, application performance and layer thickness may vary.

3. Application Tools

- Paint roller
- Mixing vessels
- Drilling machine
- Smoothing tool
- Scraper
- Stirrer
- Brush
- Balance
- Breaker
- Trowel
- Spike roller
- Mortar mixing machine

4. Mixing and Consumption Instruction

Primer HEGGEL Pox 406		
Components	kg/m ²	Parts by Weight
HEGGEL Pox 406 Solution	0.149	7.36
HEGGEL Pox 406 Hardener	0.081	4.00
HEGGEL Pox 406 Additive	0.020	1.00
Total	0.250	
Pore Filling Scratch Coat Floor		
Components	kg/m ²	Parts by Weight
HEGGEL Flex 588 Solution 1	0.571	2.5
HEGGEL Flex 586 Solution 2	0.229	1.0
HEGGEL Filler 40	0.800	3.5
Total (per 1 mm thickness)	1.600	-
Filling of Cavities Socket / Wall (If necessary)		
Components	kg/m ²	Parts by Weight
HEGGEL Flex 586 Solution 1	0.385	2.5
HEGGEL Flex 586 Solution 2	0.154	1.0
HEGGEL Flex 588 Filling Powder	1.353	8.8
HEGGEL Filler 90	0.008	0.05
Total	1.900	-
Floor Areas HEGGEL Flex 588		
Components	kg/m ²	Parts by Weight
HEGGEL Flex 588 Solution 1	1.785	2.5
HEGGEL Flex 586 Solution 2	0.715	1.0
HEGGEL Flex 588 Powder	6.500	9.1
Total	9.000	-
Wall Surfaces HEGGEL Flex 586		
Components	kg/m ²	Parts by Weight
HEGGEL Flex 586 Solution 1	2.272	2.5
HEGGEL Flex 586 Solution 2	0.908	1.0
Total	3.180	-
Slip-Resistant Top Coat		
Components	kg/m ²	Parts by Weight
HEGGEL Flex 588 Solution 1	0.286	2.5
HEGGEL Flex 586 Solution 2	0.114	1.0
HEGGEL Filler 40	0.200	1.75
Total	0.600	-

Note: If the HEGGEL Flex 588 coating system is being used as a membrane layer for tile or brick lining, please consult with HEGGEL for advice on achieving optimal adhesion between the HEGGEL Flex 588 system and the subsequent layer of tiles or bricks.

5. Application

For highly absorbent substrates, apply a pore-filling scratch coat. If necessary, use the pore-filling scratch coat floor method. Pour the contents of each pre-dosed component container into a suitable plastic mixing vessel. For smaller batches, weigh the components accordingly. Using a drill machine with a stirrer at 300 - 500 rpm, mix thoroughly until a homogeneous mixture is achieved. Move the stirrer along the walls and bottom of the mixing vessel to ensure even mixing. Pour the mixture into a new mixing vessel. Add the appropriate amount of HEGGEL Filler 40 and mix thoroughly until the mixture is homogeneous and lump-free. Apply the material with a smoothing tool, scratching it over the primer. Avoid trowel strokes and ridges for a smooth finish.

If required, perform cavity filling for the plinth or wall. Pour the contents of each pre-dosed component container into a suitable plastic mixing vessel. For smaller batches, weigh the components accordingly. Using a drill machine with a stirrer at 300 - 500 rpm, mix thoroughly until a homogeneous mixture is obtained, ensuring the stirrer reaches the walls and bottom of the vessel.

Transfer the ready mixture to another mixing vessel and add the appropriate amount of HEGGEL Flex 588 Filling Powder while mixing. Continue to mix until a homogeneous, lump-free mixture is achieved. Then, add HEGGEL Filler 90 and mix thoroughly until the mixture is homogeneous. The necessary amount of HEGGEL Filler 90 depends on the temperature; always add enough to achieve a workable mixture.

Apply the mixture with a smoothing tool to the desired thickness, avoiding trowel impacts and burrs. Ensure the filling has a sealed surface. To achieve a smooth surface it is recommended to roll over 1 - 2 times with HEGGEL Flex 586 solution mixture.

Floor Surfaces: HEGGEL Flex 588

Pour the contents of each pre-dosed component container into a suitable plastic mixing vessel. For smaller batches, weigh the components accordingly. Using a drill machine with a stirrer at 300 - 500 rpm, mix thoroughly until a homogeneous mixture is achieved, ensuring the stirrer reaches the walls and bottom of the vessel.

Transfer this mixture into a mixing machine and add one bag of HEGGEL Flex 588 Powder (22 kg) while the machine is operating. Mix thoroughly until a homogeneous, lump-free mixture is obtained.

Apply the ready mixture in a single work step, onto the prepared substrate using a smoothing tool or scraper. Then level the surface with a spiked roller to deaerate.

Wall Surfaces: HEGGEL Flex 586

Pour the contents of each pre-dosed component container into a suitable plastic mixing vessel. For smaller batches, weigh the components accordingly. Using a drill machine with a stirrer at 300 - 500 rpm, mix thoroughly until a homogeneous mixture is achieved, ensuring the stirrer reaches the walls and bottom of the vessel.

Transfer the mixture into a new mixing vessel and continue mixing thoroughly until a homogeneous, lump-free mixture is obtained. Apply the ready mixture using a paint roller in multiple work steps until the required thickness is reached. For skirting and wall areas, approx. 10 work steps are necessary, with each step applying a thickness of approx. 0.3 mm.

Slip-Resistant Top Coat

If a slip-resistant top layer is required, pour the contents of each pre-dosed component container into a suitable plastic mixing vessel. For smaller batch quantities, weigh the components accordingly. Using a drill machine with a stirrer at 300 - 500 rpm, mix thoroughly until a homogeneous mixture is obtained, ensuring the stirrer reaches the walls and bottom of the vessel.

Transfer the mixture into a mixing vessel or machine. While the machine is operating, add the appropriate amount of **HEGGEL Filler 40**. Mix carefully until a homogeneous, lump-free mixture is achieved.

Pour the ready-mixed material directly onto the prepared substrate, avoiding sedimentation of fillers. Spread it thinly and evenly using a smoothing tool. To achieve a uniform surface, roll over it with paint roller.

6. Repairing Defects

Remove damaged areas by cutting with beveled edges. Grind the substrate and borders 150 mm wide with sandpaper, then clean with a cloth moistened with **HEGGEL Universal Cleaner**. Prime the substrate and apply **HEGGEL Flex 588** for floor area in one step or **HEGGEL Flex 586** for wall areas in several steps, adhering to the required waiting times. Apply the new material exclusively to the Grinded areas.

7. Cleaning

Any tools that are contaminated with uncured material can be cleaned using **HEGGEL Universal Cleaner**. Only clean in areas with good ventilation and observe safety measures.

Hands should be cleaned using skin friendly paint removers, hand washing paste and soap. Prior to starting work, it is recommended to apply protective hand cream.

8. 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.

Note: Dispose synthetic resin materials that have not yet hardened, cleaning agents, and partially filled packaging as hazardous waste.

Only mix and apply the material in well-ventilated areas. Ensure proper ventilation when working in enclosed spaces such as pits or tanks. Do not smoke during the process. Keep materials away from heat and open flames, particularly during welding activities. Avoid direct skin contact with the materials and wash hands thoroughly with soap and water, avoiding the use of solvents for skin cleaning. Use skin protection soap and ointment as necessary. Adhere to all relevant safety regulations to prevent accidents.

Technical Data

Title	DIN	Value	Unit
Density	DIN EN ISO 1183-1, ASTM D 792 (floor)	1.80	g/cm ³
Density	DIN EN ISO 1183-1, ASTM D 792 (wall)	1.06	g/cm ³
Flexural Strength	DIN EN ISO 178, ASTM C 588	8	MPa
Compressive Strength	DIN EN ISO 604, ASTM C 579	21	MPa
Modulus of Elasticity	DIN EN ISO 178, ASTM C 588	140	MPa
Electrical Resistance	DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	10 ¹⁴	Ohm
Elongation at Tear	DIN EN ISO 527, ASTM C 307	10	%
Hardness	Shore A	95	-
Tensile Strength	DIN EN ISO 527, ASTM C 307	4.5	MPa
Elastic Deformation	-	95	%
Plastic Deformation	-	5	%

*The provided data represent mean values.

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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 latest 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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