StenCoat® 2EP 510G

1. Product Description

StenCoat® 2EP 510G is a seamless, self-leveling floor coating for heavy- and medium-duty service. It is a system consisting of solvent-free epoxy resin, pigment and solid filler. **StenCoat® 2EP 510G** is a seamless, long-lasting and robust coating system resistant to abrasion, chemicals and penetration.

It is resistant to inorganic acids and alkalis, oils, fuels, antifreezes and many chemicals. **StenCoat® 2EP 510G** can be applied at lower ambient temperatures (down to 10 °C) and has a longer working time than the standard type.

Epoxy-Based Heavy/Medium Duty Floor Coating

Highlights

- Epoxy-based self-leveling floor coating
- Solvent-free
- Long-lasting, robust and durable
- Resistant to oils, fuels, detergents and many chemicals
- Protects the surface and extends its service life
- Creates a hygienic, clean, and durable seamless floor
- Suitable for all hygienic facilities, chemical process areas, heavy/medium duty industrial areas and workshops
- Its decorative appearance allows for use in social spaces, offices and stores

2. Uses

StenCoat® 2EP 510G is used in chemical process areas, wet and dry areas in food preparation places, clean rooms, beverage facilities, water bottling plants, cafeterias, medium-duty workplaces, maintenance and repair workshops, print shops, social spaces, offices, waiting rooms, clinics and similar places. It is suitable for concrete, terrazzo, tile, steel, other metal surfaces and water-resistant plywood surfaces in these areas.

3. Application

3.1. Surface Preparation

Proper surface preparation is of great importance. For this purpose, if detailed information about the condition of the surface is provided, **Stenkim®** will recommend the most suitable surface preparation methods. During application, the ambient and surface temperature must be between 10-30 °C. The moisture content in the floor must be maximum 5%.

3.2. Primer

StenAst® 2EP or **StenAst® 2EP-F** must be used as primer on clean concrete floors. Depending on the surface roughness, 0.2-0.4 kg/m² of primer is applied. Sand can be spread on the primer at 3-4 times the weight of the primer.

Excess sand must be swept after 24 hours and the surface must be sanded. If sand is not used, there is no need for sanding. Similarly, if another type of primer is required by surface characteristics, the application instructions of the primer must be followed.

For areas where moisture is expected from the floor, it is recommended to first apply **StenAst® S** to significantly improve adhesion strength. **StenAst® S** consumption is approximately 50 g/m². After **StenAst® S** is applied, the floor becomes ready for application of the next layer within 30 minutes at the latest. In cases where the topcoat needs to be leveled with leveling mortar, the next layer is applied while the primer is not yet fully dry and is still tacky.

3.3. Leveling Mortar

If there are irregularities exceeding 3 mm per meter on the surface, leveling mortar must be applied to level the floor. In this case, while the primer is not yet fully dry, **StenSilica** #5 (0.3-0.5 mm quartz sand) is sprinkled on it. The surface must be protected from contaminants and dust until the next layer is applied.

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Leveling mortar is necessary to make the surface smooth and to ensure that the self-leveling main coating provides a smooth surface. Uneven surfaces in need of repair must first be leveled with a mortar consisting of **StenCoat® 2EP 510G** and graded **StenSilica** quartz sand. In the application of **StenCoat® 2EP 510G** as leveling mortar, 1-3 parts by weight of **StenSilica** #6-#9 aggregate are added per 1 part by weight of the coating system (A+B combined); the aggregate is first homogenized with component A in a horizontal rotary mixer, then component B is added.

Aggregate size is chosen not to exceed one-third of the leveling depth. The mixture, made completely homogeneous by stirring for 2-3 minutes, is spread to the required thickness, starting from one edge. It is spread immediately with a 1-meter wide straight squeegee and then smoothed with a power trowel.

The surface must be protected from contaminants and dust until the next layer is applied. These operations must be completed as quickly as possible before the material starts to harden.

3.4. First Coating Layer

The first coat is a thin skim coat that seals the pores of the surface and provides an even base for the final coat. It is of great importance that the surface to which this self-leveling material will be applied after mixing has been properly prepared. Quick, easy and error-free application is possible on the floor prepared in the manner described above.

StenCoat® 2EP 510G consists of two components called A and B, packaged in the required amounts for the optimal mixture. First, sufficient material is prepared considering the area and roughness of the surface to be coated and the application team's capacity. Before starting the process, the components are mixed separately in their containers for 2-3 minutes. Then component B is added to the container holding component A, and the two components are mixed until homogeneous. Mixing is carried out with a jiffy-type mixer and a powerful low-speed (300-500 rpm) machine. There must be no unmixed material left on the walls or at the bottom of the container.

To prevent air from entering the mixture, speeds higher than specified must not be used and the stirrer tip must be kept in the bucket at all times. The mixture is poured onto the floor and applied with a steel or plastic notched trowel and a roller with a 25-50 mm nap at 0.6-1.2 kg/m^2.

3.5. Second Coating Layer

It is applied the same way as the first layer, but to a greater thickness. The amount of material to be applied is 1.5-2.0 kg/m^2. If necessary, after applying **StenCoat® 2EP 510G**, appropriately sized crushed aggregate can be sprinkled on the surface to give the surface a granulated texture.

Aggregates must be selected among high hardness, abrasion-resistant materials. **StenSilica** #4 is suitable for this purpose. Additionally, if **StenCoat® 2PUV 401**, 402 or 403 is applied as a topcoat, the dirt-repellent property and ultraviolet resistance of the surface are increased.

3.6. Cleaning

Equipment used can be cleaned at the end of the job with **StenSolver CL**.

4. Safety

Applicators and supervisors must read the Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be disposed of in compliance with relevant regulations and laws. The application must be carried out by skilled workers under the supervision of experts and the applicators must use all personal protective equipment required for the worksite and the task such as goggles, mask and gloves.

5. Storage

Storage temperature must be between 5 and 30 °C. Packages must not be exposed to direct sunlight. Under these conditions, the material will retain its properties in unopened containers for 12 months from the production date.

Low temperatures may cause crystallization of the product; in this case, the product can be used after being warmed to +20 °C and homogenized. After prolonged storage, the product must be stirred thoroughly before use.

6. Disclaimer

This document is provided for general information and is based on **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information without prior notice.

Stenkim® warrants that its products conform to the stated specifications on delivery. The buyer is responsible for determining the product's suitability for the intended purpose and for all conditions of transport, storage, application, and use. **Stenkim®** accepts no liability for results obtained under conditions outside its control. **Stenkim®**'s liability under this warranty is limited to replacement of non-conforming product and excludes any consequential or indirect damages.

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7. Technical Data

Property	Method	Result
Base Polymer		Epoxy
Solids Content (by weight)	EN ISO 3251	100%
Color		Catalog
Density	EN ISO 2811-2	1.6 ± 0.1 g/cm³
Application Thickness (per coat)		min. 0.5 mm
Final Coat Thickness		min. 1 mm
Hardness	EN ISO 868	D70-80
Adhesion Strength	EN 1542	> 5.48 N/mm² (concrete failure)
Elongation at Break	ASTM D 412 Die B	0.2%
Abrasion Resistance	EN ISO 5470-1 Taber dry, H18, 1000 cycles, 1 kg	155 mg
Impact Resistance	EN ISO 6272-1	Class 3 ≥ 20 Nm (No Damage)
Pot Life @20 °C		60 ± 15 minutes
Tack-free Time @20 °C		3 hours
Time to Open to Traffic @20 °C		3 days
Cure Time for Chemical Resistance @20 °C		7 days
Reaction to Fire Class (system)	EN 13501-1	Bfl-s1
Shelf Life		1 year
Packaging		20 kg sets

Stenkim® reserves the right to make changes to the values in this table at any time. *CE: CE marked in accordance with EN 1504-2 (PR-C) (DoP STN-PRC-2EP510G-0001).*

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