

1. Product Description

StenCoat® 2EP 510 is a heavy and medium duty, self-leveling, seamless floor coating. It is a system consisting of solvent-free epoxy resin, pigment and solid filler. **StenCoat® 2EP 510** 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.

2. Uses

StenCoat® 2EP 510 is used in chemical process areas, wet and dry areas in food preparation places, clean rooms, beverage facilities, water filling facilities, cafeterias, medium-duty businesses, maintenance and repair workshops, printing houses, 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 and correct surface preparation is of great importance. For this reason, if detailed information about the surface condition is provided, the most suitable surface preparation procedures will be recommended by **Stenkim®**. During application, the ambient and surface temperature must be between 15-30 °C.

The moisture content in the floor should 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, 0.3-0.7 kg 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 (see primer selection), 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 the next layer application within 30 minutes at the latest.

In cases where the top coating 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 ground. 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.

Epoxy-Based Heavy/Medium Duty Floor Coating

Highlights

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



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 should first be leveled with a mortar consisting of **StenCoat® 2EP 510** and **StenSilica** (coated and sized quartz sand). In the application of **StenCoat® 2EP 510** as leveling mortar, first the A component and **StenSilica** #6-#9 aggregate at 2 times the total volume (5.4 kg for one liter of polymer) are homogenized in a concrete mixer type stirrer, then the B component is added.

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

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

3.4. First Coating Layer

After mixing, the surface where this self-leveling mixture will be applied must be prepared as required. Quick, easy and error-free application is possible on the floor prepared in the manner described above. **StenCoat® 2EP 510** consists of two components called A and B, packaged in the required amounts for the optimal mixture.

First, sufficient material is prepared considering the surface area to be coated, roughness, and the application team's capacity. Before starting the process, components are mixed separately in their containers for 2-3 minutes. Then component B is added into the container of component A and they are mixed until a homogeneous mixture is obtained.

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 should not be used and the stirrer tip should 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 25-50 mm nap roller at 1.5-2.0 kg per square meter.

3.5. Second Coating Layer

It is applied the same way as the first layer, but at a lower thickness. The amount of material to be applied is 0.6-1.2 kg/m². If necessary, after applying **StenCoat® 2EP 510**, appropriately sized crushed aggregate can be sprinkled on the surface to provide granulation.

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 top coat, the dirt-repellent property and ultraviolet resistance of the surface are increased.

4. Cleaning

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

5. Safety

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



6. 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 heating and homogenizing at +20 °C. The product must be stirred thoroughly before use after prolonged storage.

7. Disclaimer

This document is provided for general information and reflects **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information at any time without 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 application and for all conditions of transport, storage, handling, 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.



8. Technical Data

Property	Method	Result
Base Polymer		Epoxy
Solid Content	EN ISO 3251	100
Color		Catalog
Density	EN ISO 2811-2	1.6 ± 0.1 g/cm ³
Application Thickness (per coat)		min. 0.5 mm
Hardness	EN ISO 868	D74.5-75.5
Adhesion Strength	EN 1542	>5.48 N/mm ² (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		50 ± 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 (DoP STN-PRC-2EP510-0002).*

