

1. Product Description

StenCare® 3EP QC-2 is a heavy-duty type, solvent-free epoxy-based coating and repair mortar which can be applied by pouring, and forms a high bearing capacity and anti-slip floor with special size solid fillers. It can be used as a two or three-component system. It has high adhesion and abrasion resistance with resistance to chemicals.

The polymeric mixture is compatible with thermal expansion of concrete made from Portland cement and adheres excellently to concrete. It is resistant to weak organic and inorganic acids and alkalis, oils, fuels and antifreeze, and many chemicals.

2. Uses

StenCare® 3EP QC-2 is used in repairing old concrete surfaces, broken slab and joint edges and similar locations. It is suitable for use on pedestrian walkways, industrial storage tank yard floors, airport pedestrian pavements, turning and deceleration zones in parking areas, and on concrete, mosaic, tile, wood, metal and asphalt surfaces in these spaces.

3. System Design

Current status and application objective must be defined with all aspects during system design. Depth is recommended to be minimum 5 cm in repairs of heavy traffic bearing floors, minimum 3 cm for medium traffic bearing floors, minimum 2 cm for light traffic bearing floors. For surface coatings, a minimum thickness of 2.5 mm is required.

Maximum size of the aggregate to be used must not exceed half of the minimum application height.

4. Application

4.1. Surface Preparation

Proper and correct surface preparation is of great importance. Oil, dirt, asphalt or old patch materials must not be left on the surface. Dust and loose materials must be removed.

During application, the ambient and surface temperature must be between 5-30 °C, and the relative humidity of the surface must not exceed 75%.

4.2. Primer

The material itself can be used as primer at clean concrete floors and indoors. In this case, 0.2-0.3 kg **StenCare® 3EP QC-2** is applied depending on the roughness of the surface. However, to greatly increase adhesion strength, it is recommended to first apply **StenAst® S**.

StenAst® S consumption is approximately 50 g/m². After application of **StenAst® S**, the floor becomes suitable for application of **StenCare® 3EP QC-2** within 30 minutes. After **StenCare® 3EP QC-2** is applied, it is left to dry for 30 minutes and the actual coating is applied while this layer is still tacky.

Similarly, if another type of primer is required by surface characteristics (see primer selection), the application instructions of the primer must be followed.

Rapid Curing Epoxy-Based Repair and Coating Mortar

Highlights

- Withstands harsh conditions
- Cures much faster than standard epoxies
- Non-slip
- 100% compatible with concrete
- Ideal for both small and large concrete repairs
- Resistant to chemicals
- Long-lasting and easy to apply



4.3. Coating Application with Broadcast Aggregate

This method is used for the purpose of superficial coating or thin surface repair. Components A and B have self-leveling property when they are mixed. The surface must be prepared as required for the application of this material.

Mixing the components is carried out as follows. First component A is mixed for 1-2 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. Mixing process must not be extended; it must be completed in 2-3 minutes and mixed material must not be left in the container.

Otherwise, since the curing reaction is an exothermic reaction, the material in the container heats up and the curing rate increases. In this case, the mixed material in the container quickly solidifies and becomes unusable. However, since the material poured on the floor will be cooled by the floor, the reaction slows down and the necessary time for application is gained.

The mixture is poured on the surface and applied at 2.0-2.5 mm thickness via steel or plastic notched trowel, trowel and a brush or 25-50 mm nap roller. Right after that, 1.5 to 4 mm size crushed aggregate is spread and desired surface granulation is obtained. Aggregates must be selected among high hardness, abrasion resistant materials.

StenSilica #8-#9 are suitable for this purpose. Loose aggregates on sufficiently cured material can be swept away. The aggregate size for the top layer is selected according to the desired surface roughness.

It is recommended to use **StenCoat® 2PUV 401**, 402 or 403 as the top coat to increase the material's daylight resistance.

4.4. Repair Application with Aggregate Mixture

This method is mostly used to repair concrete pavements. The surface must be prepared as required for the application of this material. For this purpose, heavy-duty mortar mixers of Hilti or concrete mixer type must be used.

Component A is placed in the mixer and component C is added on top and mixed for 1-2 minutes until a homogeneous structure is obtained. Component B is then added to this mixture and mixed for another 1-2 minutes, and immediately poured to the application site; first it is roughly spread and then leveled with a trowel. If desired, additional aggregate can be broadcast on the surface before the material cures.

Loose aggregates on sufficiently cured material can be swept away. Aggregates must be selected among high hardness, abrasion resistant materials. **StenSilica** #5-#10 (0.25-7 mm) are suitable for this purpose.

It is recommended to use **StenCoat® 2PUV 401**, 402 or 403 as the top coat to increase the material's daylight resistance.

5. Cleaning

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

6. 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.



7. Storage

It must be stored away from open flame and sources of ignition. Materials should be stored at 5-30 °C in a temperature-controlled environment, protected from daylight and moisture. Under these conditions, the material will retain its properties until the expiration date in unopened packages.

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.

8. 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.



9. Technical Data

Property	Method	Result
Base Polymer		Two-Component Epoxy
Solid Content		100
Color		Gray
Application Thickness		min. 2.5 mm
Hardness (Shore)	EN ISO 48-4	D77
Density (A+B+C)		2.1 ± 0.05 g/cm ³
Flame Resistance		Pass, non-flammable
Abrasion Resistance (A+B+C)	ASTM D 4060 CS10/1000 rev/1 kg	100 mg
Chemical Resistance; Jet Fuel, Motor Oil, Antifreeze, Salt @20 °C	ASTM D-1308	Pass
Pot Life @20 °C		>30 minutes
Tack-free Time @20 °C/@30 °C		1 hour / 30 minutes
Time to open to traffic @20 °C/@30 °C		4 hours / 1 hour
Cure Time for Chemical Resistance @20 °C/@30 °C		5 days
Compressive Strength	EN 12190	>60 MPa
Pull Off Test	EN 1542	>3 MPa
Flexural Strength	ASTM C 78 / C 78M-22	17 MPa
Shelf Life		1 Year
Packaging		24 kg sets

Stenkim® reserves the right to make changes to the values in this table at any time.

