

1. Product Description

StenSeal® 2EP 231 is a two-component, cold-applied, chemically cured epoxy-based joint filler material with high bond strength, suitable for heavy traffic conditions. Designed for sloped, vertical and overhead joints, it is formulated not to sag during application. It is resistant to organic and inorganic acids and alkalis, oils, fuels, antifreeze, and many chemicals.

2. Uses

StenSeal® 2EP 231 is specifically manufactured for use in joints of concrete pavements under heavy load and traffic. Because it is non-sag, it can be used safely in vertical, sloped and overhead joints where a self-leveling resin would run out of the joint.

StenSeal® 2EP 231 is particularly suitable for use in roads, stadiums, industrial facilities, port areas, dam platforms, warehouses, bonded warehouses and storehouses, shops and cargo areas, and all similar interior and exterior concrete surfaces.

3. Application

3.1. Surface Preparation

Joint surfaces must be clean and dry. Oil, grease, bitumen, and old joint materials must be completely removed. Loose material on the joint edges must be removed; broken joint edges must be repaired.

StenSeal® 2EP 231 is affected by water before it sets, like all other epoxy-based materials. Therefore, the joints must be dry and the sealant must not contact water until chemical curing occurs.

3.2. Primer

StenSeal® 2EP 231 can be used in new concrete joints without primer. However, primer application helps minimize the negative effects of possible contamination, concrete moisture, and loose material in all cases. For this reason, **StenAst® 2EP** is recommended for use on concrete, glass, wood, metal and all types of surfaces.

3.3. Backer Material

A backer rod that preferably does not adhere to the sealant must be placed in the joint to achieve the sealant depth determined by the joint width. Closed-cell polyethylene foam rods (**StenBacker**) are suitable for this purpose. The diameter of the backer rod must be 10-25% larger than the joint width, and the rod must be placed tightly in the joint.

Care must be taken not to damage the backer rods during placement. In wide joints, semi-rigid materials, such as polystyrene foam, can be used instead of a backer rod. In such cases, a polyethylene tape must be placed over the backing material to prevent the sealant from adhering to it.

3.4. Mixing

StenSeal® 2EP 231 consists of two components called A and B, packaged in the required amounts for the optimal mixture. Component A is first homogenized in its own container for 1-2 minutes; the entire B component is then poured onto component A and mixed for 3 minutes with a low-speed drill (100-500 rpm) fitted with a suitable

Cold-Applied, Epoxy-Based, Non-Sag Joint Filler and Crack Repair Material

Highlights

- Two-component, epoxy-based
- Ideal for vertical, sloped and overhead applications
- Cold-applied and easy to apply
- Cures chemically
- High bond strength to concrete
- Has high abrasion resistance
- Suitable for use in all joints and concrete cracks where high load-carrying capacity and limited flexibility are required
- Resistant to dilute acids and bases, solvents, and many chemicals



propeller or paddle. When mixing by hand, longer mixing times are required to obtain a homogeneous mixture. During mixing, move the mixer through all parts of the container while avoiding air entrainment.

3.5. Application

The amount of sealant that can be used within the pot life must be determined according to the application area and the capacity of the application equipment. Mixed material must be used within the pot life. Under no circumstances should any solvent be used to thin sealant that has exceeded its pot life.

Material that has exceeded its pot life must not be used. The prepared mixture is loaded into a piston-type sealant gun. Fit the applicator with a nozzle narrow enough to enter the joint.

During application, advance the nozzle tip by sliding it over the backing material in the joint. This ensures that no gap remains beneath the sealant and that a sufficient amount of sealant is applied. After application, the sealant surface must be smoothed with a spatula.

Application can also be carried out directly with a spatula when necessary. It is recommended to tape both sides of the joint before application, especially where decorative appearance is important. In this way, material that gets onto the area outside the joint during application is removed by pulling off the tape after application.

3.6. Restrictions

It is not recommended for joints narrower than 6 mm. It must not be used on dirty, oily, dusty or wet joints. Cleaning such joints before application is important for ensuring good adhesion.

Although the surface has high load-bearing capacity, studded tires, snow chains and stiletto heels may damage it. During application, ambient temperature must not exceed 35 °C or fall below 5 °C. If application under conditions outside this range is necessary, contact **Stenkim®**.

3.7. Cleaning

Equipment and any other tools contaminated with sealant must be cleaned before the sealant cures. For that purpose, tools must first be wiped with a cloth or rag and then cleaned with **StenSolver CL** or aromatic solvents such as toluene and xylene.

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

The material must be kept in dry indoor storage. The recommended storage temperature is 10-25 °C. 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.

7. Technical Data

Property	Method	Result
Base Polymer		Epoxy
Solids Content (by weight)		100%
Color		Catalog
Density		1.6 ± 0.05 g/cm ³
Elongation at Break	ASTM D 412 Die B	> 60%
Hardness (Shore)	EN ISO 868	D40-60
Compressive Modulus	ASTM D 695	730 MPa
Tensile Strength	ASTM D 412	6.2 MPa
Tensile Modulus @0.05 strain	ASTM D 412	24 MPa
Pot Life @20 °C		30 minutes
Tack-free Time @20 °C	EN 14188-2	1 hour
Time to Open to Heavy Traffic @20 °C		1 day
Cure Time for Chemical Resistance @20 °C		4 days
Shelf Life		1 year
Packaging		10 kg sets in cans

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

