

1. Product Description

StenSeal® 2PS 111 is a two-component, cold-applied, polysulfide-based joint sealant. It cures chemically, is non-sagging and elastomeric, and has high bond strength. It is suitable for heavy traffic conditions and resistant to wastewater, solvents, fuels, hydraulic fluids, oils and dynamic movement.

Its polysulfide structure allows it to accommodate permanent relative displacement caused by settlement of building or infrastructure elements. Designed for sloped, vertical and overhead joints, it is formulated not to sag during application.

StenSeal® 2PS 111 is classified as Type M, Grade NS, Class 50, Use T according to ASTM C 920. Compliance with EN 14188-2 has been certified by TSE.

2. Uses

StenSeal® 2PS 111 is designed for underwater applications and for applications where high chemical resistance is required. It is also well suited as a joint sealant for airport runways, parking areas, terminals, ramps, cargo areas and roads, as well as highways subject to all types of traffic, secondary roads, bridge connections, stadiums, industrial floors, sidewalks, fuel stations, roads and concrete-paved areas at petrochemical and other industrial facilities. It is suitable for all kinds of vertical and horizontal joints in open and enclosed areas. **StenSeal® 2PS 111** can be used for both indoor and outdoor applications.

3. Joint Design

Joint width must not be less than two times the expected movement or 8 mm. In joints narrower than 15 mm, the sealant depth must be equal to the joint width. For joints 15-25 mm wide, sealant depth must be equal to 80% of the width (min. 14 mm).

For wider joints, sealant depth must be set to 20 mm. To adjust the depth, backing material must be used inside the joint. The backer material must be placed at a depth equal to the combined sealant depth and the recess left at the surface.

The calculated dimensions for some joint widths are given in the table. For new concrete slabs, the design and filling of control joints (formed during casting or cut after casting) are also important for controlling shrinkage cracks that may occur during and after drying. It is recommended to review our technical documentation regarding joint design.

Joint Width (mm)	8	10	12	14	16	18	20	24	28	32	36
Sealant Thickness - mm	8	10	12	14	14	14	16	19	20	20	20
Sealant Recess - mm	4	5	6	7	7	7	8	10	10	10	10
Backer Rod Diameter - mm	10	13	15	18	20	23	25	30	35	40	45
Minimum Backer Rod Depth - mm	12	15	18	21	21	21	24	29	30	30	30
Consumption - meters / 10 kg set	92	59	41	30	26	23	18	13	11	9	8

Water and Chemical Resistant, Non-Sagging Polysulfide Joint Sealant

Highlights

- Cures chemically
- Can be applied vertically and overhead
- High adhesion strength
- Resistant to static and dynamic movement
- Resistant to fresh water, salt water and wastewater; solvents; fuels; oils; acids and bases; and various chemicals
- Can also be used to repair cracks in concrete floors



4. Application

4.1. 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.

4.2. Primer

StenSeal® 2PS 111 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. Therefore, **StenAst® SPS** is recommended for glass and similar surfaces, and for all kinds of surfaces where continuous water contact is expected.

4.3. 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.

4.4. Application

StenSeal® 2PS 111 consists of two components called A and B, packaged in the required amounts for the optimal mixture. First, component A is homogenized in its container for 1-2 minutes. Then all of component B is poured onto component A and mixed for 3 minutes with a low-speed drill (100-500 rpm) fitted with a suitable 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. 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. Repairing cracks and ensuring watertightness is especially important on concrete pavements at airports and highways.

StenSeal® 2PS 111 can also be used for these purposes. In cracks, it is generally recommended to rout a groove at least 10 mm deep and 6 mm wide. Repair by routing alone is sufficient in areas where the cracks are infrequent. In areas with severe cracking, coating is recommended for narrow cracks and combined sealing for wide cracks.



4.5. 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.

5. 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.

6. 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.

7. 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.



8. Technical Data

Property	Method	Result
Base Polymer		Two-Component Polysulfide
Solids Content (by weight)		100%
Color		Grey, Black
Density		1.70 ± 0.10 g/cm ³
Movement Class	In extension	50%
Movement Class	In compression	50%
Elongation at Break		> 500%
Hardness (Shore)	EN ISO 868	A10-20
Elastic Recovery	EN 14188-2	>85%
Pot Life @20 °C		1 hour
Tack-free Time @20 °C	EN 14188-2	5 hours
Ready for Light Foot Traffic @20 °C		24 hours
Time to Open to Heavy Traffic @20 °C		2 days
Cure Time for Chemical Resistance @20 °C		2 days
Shelf Life		1 year
Packaging		10 kg sets in cans
Related Standards		EN 14188-2, ASTM C 920, SS-S-200E, BS 5212

Stenkim® reserves the right to make changes to the values in this table at any time. *CE: CE marked in accordance with EN 14188-2 (DoP STN-SS2PS111-0001).*

