

1. Product Profile

StenSeal® BRD is a hot applied crack repair and joint sealant, composed of modified asphalt, polymers, plasticizers and fillers. It has high cold elasticity and resilience. It enables heavy traffic conditions soon after its application. It is suitable to be used for filling cracks, canals and joints in asphalt pavements, and concrete-asphalt joints.

StenSeal® BRD conforms to EN 14188-1 standard.

StenSeal® BRD is available in 11 kg plastic packages.

2. Uses

StenSeal® BRD is used in bridge expansion joints, fixed end joints and load bearing joints. It is also suitable for repairing asphalt roads and for heavy vehicle traffic. It can be used in joints between concrete and asphalt.

3. Joint Design

The standard joint width with aggregate mixture should be 50 cm and the joint filling depth should be set as minimum 5 cm and maximum 20 cm. This dimension can be extended up to 60 cm if needed. In joint filling applications without aggregate mixture, the joint width should not be less than four times the expected movement or less than 6 mm. Please contact **Stenkim®** to determine the appropriate joint dimensions.

4. Application

4.1. Surface Preparation

Joint surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the joint walls must be removed; broken joint walls must be repaired.

4.2. Heating

StenSeal® BRD must be melted in a pot with mixer and temperature-controlled oil jacket. Material poured in the melting pot must be homogeneously heated and mixed. The mixture must be heated up to and stabilized at 180-200 °C. Mixing should be carried out at low rpm and hot material should not be allowed to contact with air as far as possible. The temperature of oil should never exceed 200 °C. Higher

Hot Applied Elastomeric Joint and Crack Sealant For Bridge Expansion

Highlights

- Asphalt-polymer based
- Hot applied
- Does not get brittle or fractured under cold temperatures; keep its elasticity
- Hardens in a short time to bear heavy traffic conditions
- Used for sealing cracks and joints at asphalt pavements

oil temperatures may damage the material due to local over-heating.

4.3. Application

Melted material must be poured hot into the joints. In large scale applications, use of pumping systems equipped with heated steel pipe is recommended. Especially in cold weather, it is recommended to heat the surfaces by means of an LPG burner or an electric blower and to apply **StenSeal® BRD** in hot joints for better adhesion.

Heat resistant **StenBacker** roving is placed in the closed cell of the appropriate diameter for the joint gap. With **StenSeal® BRD**, which is melted and made ready for use, the gap remaining on the wick is filled and the material is applied as thinly as possible on all horizontal and vertical surfaces of the area to be filled in a range of 1-3 mm. While the first layer is still hot, the steel plate is placed centrally over the joint gap and a single layer of **StenSeal® BRD** is applied to cover the plate.

The remaining part of the joint gap is filled with mortar consisting of **StenSeal® BRD** and 9,5mm 19mm gradation,

heated aggregate. Add melted **StenSeal® BRD** into the aggregate heated to 180-200°C in a drum and mix together.

Fill the joint gap with the resulting mortar so that the joint gap is flush with the existing pavement. The backfill is compacted and leveled by running a roller of sufficient weight in all directions over the applied material.

For the last layer, the filling surface is heated with a heat gun, **StenSeal® BRD** is applied as a thin layer and this layer is covered by sprinkling fine aggregate. The joint is leveled by applying the roller process again.

4.4. Restrictions

StenSeal® BRD cannot be used on dirty, oily and wet surfaces. It is important to clean joints before application to ensure good adhesion. During application, the ambient temperature should not be lower than 10°C and the dew point. Application should not be made in very windy or rainy weather. Please contact **Stenkim®** if it is necessary to apply under conditions other than these.

5. Cleaning

Application devices and other sealant smudged devices must be cleaned before the sealant cures. For that purpose, tools first wiped with cloth or oakum must be cleaned with **StenSolver CL** or aromatic solvents such as toluene and xylene. These solvents are flammable and should not come into contact with hot equipment and open flames. Cleaning of equipment with solvents should be done after the equipment has cooled completely.

9. Technical Data

Property	Result
Base Polymer	Styrene Butadiene Block Copolymer
Color	Black
Density	1,23±0,1 g/cm ³
Elastic Recovery %	70
Cone Penetration (0,1mm)	10
Flow 70°C, 24 hours	Pass - No flow
Flow 84°C, 24 hours	Pass - 2mm
Brittle Temperature	Lower than -25°C
Bond -20° %100 extension	Pass
Bond -25° %100 extension	Adhesive / no cohesive damage (Concrete Breaks)
Minimum Application Temperature	170°C
Softening Point	96°C

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

6. Safety

Applicators and supervisors must read Material Safety Data Sheet (MSDS) carefully and observe the considerations written therein. 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

The material must be kept away from sunlight in dry indoor storage. Recommended storage temperature is 10-25°C. Stored in these conditions, the shelf life of unopened containers are 12 months.

8. Company Liability

The information contained in this document is based on site experience of and laboratory tests done by **Stenkim®** and meant to give general information. It is the purchaser's responsibility to ensure applicability of products to their use. All **Stenkim®** products are available in specified quality and conditions. The company accepts no liability whatsoever unless the transportation, storage, application conditions and customer use are overseen by **Stenkim®**.

Stenkim® reserves the right to update all information contained in this document without notice.