

PRODUCT DATA SHEET

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MAINTENANCE OF CONCRETE

Sika® PowerSet

TWO-COMPONENT, FAST SETTING POLYESTER GAP FILLER

Description	Sika® PowerSet is a specially formulated two-part polyester compound designed to cure quickly for repair of cementitious and stucco substrates.
Where to Use	- Crack filling. - Concrete walkways, sidewalks, stairs, decks, patios, walls, etc. - Suitable for use as a filler material for repairing small gaps occurring in typical cementitious mortar, concrete and stucco substrates.
Advantages	- Very fast curing (verify set times before usage). - Easy to install and finish. - Excellent material for minor repairs on horizontal or vertical surfaces. - Convenient packaging.

Technical Data

Packaging	300 mL (10.1 US fl. oz.) - Carton containing 12 cartridges with 2 static mixing nozzles per cartridge
Colour	Mixed : Grey Part A : Beige Part B : Black
Yield	For crack repairs : A 10 mm x 10 mm x 2.6 m long crack may be filled For spalled concrete repairs : A 100 mm x 100 mm x 25 mm surface may be repaired
Shelf Life	12 months in original, unopened packaging. Cartridges must be stored upright in cool and dry conditions, between 41 °F and 77 °F (5 °C and 25 °C) out of direct sunlight.
Product Conditionning	Condition material (cartridges) between 5 °C and 25 °C (41 °F and 77 °F) prior to use.
Application Temperature	-10 °C to 41 °C (14 °F to 105 °F)
Properties at 23 °C (73 °F) and 50 % R.H.	
Compressive Strength ASTM D695	50 MPa (7250 psi) at 4 hours 60 MPa (8700 psi) at 24 hours 74 MPa (10 730 psi) at 7 days
Density (mixed) ASTM D1875	1.7 g/cm³ (0.06 lb/in³)
Compressive Modulus ASTM D695	3,129 MPa (4.54 x 10 ⁵ psi) at 7 days 11 MPa (1595 psi) at 24 hours 13 MPa (1885 psi) at 7 days
Tensile Strength ASTM D638	0.09 % at 24 hours 0.12 % at 7 days
Elongation at Break ASTM D638	24 MPa (3480 psi) at 7 days
Flexural Strength ASTM D790	
<i>Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.</i>	

CURE MECHANISM Sika® PowerSet is a two-component polyester formulation requiring a static mixing nozzle to combine the ingredients for a reactive chemical cure.

Cartridge, Ambient and Substrate Temperature	Gel Time*	Cure Time
-10 °C (ambient and substrate temperature only)**	60 min	360 min
0 °C to 4 °C (32 °F to 40 °F)	20 min	180 min
5 °C to 10 °C (41 °F to 50 °F)	12 min	120 min
11 °C to 20 °C (51 °F to 68 °F)	6 min	80 min
21 °C to 25 °C (69 °F to 77 °F)	4 min	40 min
26 °C to 30 °C (78 °F to 86 °F)	3 min	30 min
31 °C to 35 °C (87 °F to 95 °F)	2 min	20 min
36 °C to 40 °C (96 °F to 104 °F)	90 sec.	15 min

* Gel Time is the typical amount of time for mixed Sika® PowerSet to solidify at highest temperature in the range

** Condition the product at 5 °C (41 °F) before applying at sub zero temperatures

How to Use Surface Preparation	Cracks, small cavities and/or voids that occur in cementitious mortar, concrete or stucco substrates should be mechanically prepared to a clean, sound, dust-free condition. Extremely narrow (i.e. hair line) cracks and voids may need to be notched or routed. Dry substrate conditions are ideal, but damp conditions can be tolerated as long as the cracks, cavities or voids contain no standing water. Substrate should be frost-free.
Mixing	- Remove the twist cap from the top of the cartridge. - Reach into the opening at the top of the cartridge with pliers or similar tool and pull the top of the plastic film upwards to reveal a metal retaining clip. - Cut the plastic film open below the metal retaining clip with a utility knife. - Ensure that both components within the plastic film are free to flow prior to inserting cartridge into a standard, good quality caulking gun. 'A' component is Beige in colour. 'B' component is Black in color. - Attach the static mixing nozzle. - Begin dispensing the cartridge's contents through the static mixing nozzle. Prior to installation, the initial portion of material dispensed from the nozzle is discarded until it can be visually verified that both components are flowing and mixing to a uniform grey appearance and consistency. - If cartridge is partially used and the remaining contents is to be saved for a future application, leave the static mixing nozzle mounted on the cartridge. When ready to continue use, remove the spent static mixing nozzle by twisting counterclockwise and breaking the seal of the cured mortar; this may require pliers or a similar tool. Remove residues of cured mortar with a utility knife from the top of the openings in the plastic film to ensure fresh material is free to flow. Attach a new static mixing nozzle and repeat the dispensing and application procedures as described.
Application	After confirming that a well blended mix is being dispensed from the static mixing nozzle, fill the prepared crack, cavity or void with Sika® PowerSet gap filler.
Tooling & Finishing	Finish flush and strike even with the existing surface using a dry putty knife or small pointing trowel.
Removal	Important: Clean all tools immediately after usage, before initial set. Uncured mortar can be removed immediately from installation tools and surfaces with a solvent such as acetone, MEK or xylene. Cured material can only be removed mechanically. Heating the product will help soften the material in order to ease clean-up.
Over Painting	Cured Sika® PowerSet gap filler may inhibit certain types of paints and coatings from adhering adequately to its surface. Test for adhesion and compatibility in an inconspicuous location before committing to any paint or coating. Painting is not typically recommended. Sanding the surface will help providing a better bond.
Limitations	- Minimum recommended ambient and substrate temperature is 4 °C (40 °F). - Minimum application temperature: -10 °C (14 °F). Condition cartridge between 5 °C and 25 °C (41 °F and 77 °F) prior to use. - Maximum recommended ambient and substrate temperature is 41 °C (105 °F). - Fully-cured Sika® PowerSet is not a flexible material. Do not use in moving joints. - Not formulated to be an aesthetically pleasing product. - Do not apply over a wet, glistening surface. Substrates should be frost-free. - Material may stain porous substrates. Carry out tests on a small mock-up or in an inconspicuous location prior to proceeding with entire project. - For exterior use only — <u>The product emits a strong smell.</u> If to be used in areas such as interior foundation walls, basements, garage slabs, etc., make sure to have sufficient ventilation installed in the work area.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the product label and the most recent Safety Data Sheet containing physical, ecological, toxicological and other safety-related data. KEEP OUT OF REACH OF CHILDREN

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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