SIMSEAL®

think **SILICONE,** *think* **SIMSEAL**

ROADBOND 888®

HIGH PERFORMANCE NON-SLUMP SILICONE CONCRETE JOINT SEALANT

Description

Simseal Roadbond 888® is a high performance non-slump, one-part, moisture curing, room temperature vulcanising (RTV), 100% silicone sealant specifically formulated for concrete joint applications. 888 has ultra-high elongation but remains very durable. It exhibits excellent unprimed adhesion to concrete, steel and most other construction substrates, provided they are clean, dry and free of dust and frost. 888 has good flexibility and a low modulus, so it will maintain its integrity on joints with movement. It is unaffected by sunlight (ultraviolet rays), ozone, temperature extremes, rain and snow. It has a long service life. Under normal conditions it will maintain its physical properties between -60°C to 200°C (-76°F to 392°F).

Features

- Easy application
- 100% silicone, one-part RTV
- VOC compliant
- Smooth, non-slump paste
- Accelerated Weathering 5000 hours tested (ASTM C793)
- Can be extruded from -20 to 120°F.
- May be used in joints that are not uniform in width.
- Movement capability 100% extension and 50% compression.
- Low modulus.
- Weather and UV resistant.
- Fuel resistant-short term exposure.
- One-part, cold applied, ready-to-use as supplied; dispensed directly from the bulk container into the joint by hand or with an air-powered pump.
- Unprimed adhesion – primer is not required for bonding to General Purpose Cement concrete.
- For optimum adhesion, the surface must be clean, dry and frost-free.
- Cure time – typically, the sealant will have a skin-over time of one hour or less at standard conditions.

Aplications

Simseal Roadbond 888® is ideally suited for vertical and horizontal joints in concrete where extreme joint movement is experienced. Typical applications include new construction and remedial concrete work for concrete highways, airport runways, bridges, overpasses, shipping yards, parking garages, concrete tilt panels, external concrete facades and sidewalks.

For use in new construction, repair or remedial applications, 888 may be used to seal joints that are not uniform in width provided the movement capability of the sealant is not exceeded. May also be used in joints with minor spalling.

Standards Compliance

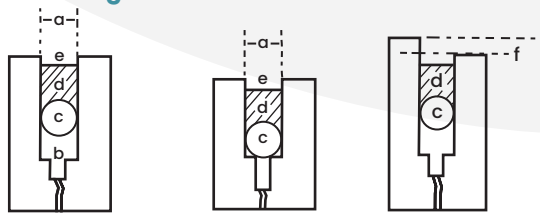
- Complies with Transport for NSW Bridge Decks QA Specification B312 – Type GN and Type GT
- Complies with Transport for NSW Rigid Pavements Specification R83
- Complies with Queensland Department of Transport and Main Roads MRTS77 (July 2019) – Joint Sealing Applications
- Suitable for rigid pavement, bridge deck, and vertical joint sealing where specification requirements are met

ROADBOND 888®

Technical Data

PROPERTY	VALUE
Chemical Base	100% silicone, one-part RTV
Cure System	Neutral (Oxime), Moisture Cure
Appearance	Smooth, non-slump paste
Tack-free / Skin-form time	40-90 minutes
Cure Time	48 hours
Full Physical Characteristics	7 days
Extrusion Rate (3.2 mm (1/8") orificio, 90 psi)	100g/min
Specific Gravity	1.13
Slump/Sag	Nil
Tensile Strength (ASTM D412)	150 psi (10.5 kg/cm²)
Tensile Strenght at 150% Elongation (ASTM D412)	3.0 kg/cm² (42 psi)
Durometer Hardness (ASTM D2240, Shore A)	20 points
Elongation at Break (ASTM D412)	1000%
Joint Movement Capability (ASTM C719)	+100% / -50%
Application Temperature	Ambient to 50°C (120°F)
Temperature Resistance	-60°C to 200°C (-76°F to 392°F)
Shelf Life	12 months
Accelerated Weathering (ASTM C793-91)	Effects of Accelerated Weathering (5000 hours)

Joint Design



Typical Joint Configuration | Low Cut Joint Configuration | Joint Design when Grinded

a. The joint width must be sufficiently wide to accommodate movement*.
b. The joint should be sawed to an adequate depth to allow the placement of backer rods and sealant, and to provide space for the removal of old sealant compounds through pumping. Please note that this pertains to standard joints exclusively, as no void space beneath the backer rod is necessary in new construction.
c. Ensure proper placement of backer rods to prevent adhesion on three sides.
d. The sealant should be installed at the appropriate depth and width.
e. The sealant must be recessed to a minimum of 9.53 mm to 12.7 mm (3/8 inch to 1/2 inch) below the pavement surface.
f. The depth of the lowest slab determines the necessary recess if grinding is anticipated; post-grinding, the sealant will attain the correct recess below the pavement surface.
* For further insights on joint width, please refer to the publications "Silicone Sealants for Application in Concrete Construction," by Spells and Klosowski, Vol. 1, N° 1, published by the American Concrete Institute, SP-70, 1981; "Construction Sealants and Adhesives", by J.B. Cook, published by Wiley-Interscience in 1970; and J.M. Klosowski's "Sealants in Construction", published by Marcel Dekker in 1989.

Surface Preparation

New concrete must undergo a curing and drying period of a minimum of 7 days.
Prior to the installation of the backer rod and the application of Roadbond 888®, it is essential that all joints are thoroughly cleaned, made dry, and cleared of any contaminants.
If it becomes necessary to flush a joint with water, this should be done in a unidirectional manner to minimize the risk of contamination.
After drying, a separate sandblasting pass should be executed for the top inch (25mm) of each surface. The nozzle must be held at an angle of no more than two inches (50mm) from the face.
Dust and loose particles within the joint should be removed using oil-free compressed air, while ensuring movement in only one direction. The presence of an oily residue may impede adhesion.

Aplication

To ensure proper application, it is essential to install the backer rod at the appropriate depth, achieving the prescribed thickness of Roadbond 888®. This installation should also create the necessary recess below the surface, as outlined in the provided table.
When applying the sealant, a continuous motion is required, directing the nozzle from the bottom upwards to prevent the formation of air voids. Furthermore, it is crucial to properly tool the sealant, pressing it against the joint faces to maximize adhesion and establish the intended recess below the surface, as illustrated below.
Any surplus sealant should be diligently removed. Following the correct recessing of the joints, the roadway can promptly be reopened to traffic upon the completion of the installation and cleanup process.

ROADBOND 888®

Caution

Roadbond 888® uses a neutral cure system, so no acetic acid or objectionable byproducts are evolved during cure.
Adequate ventilation should be provided with extensive use of this sealant. On direct contact, uncured sealant may irritate eyes. Flush well with water and call a physician.
Avoid prolonged contact with skin. See Safety Data Sheet available on this product. This product is intended for use only by professional applicators in accordance with the advice given in this document, the Safety Data Sheet (SDS) and the container(s), and should not be used without reference to the SDS that Simseal® has provided to its customers. KEEP OUT OF REACH OF CHILDREN.
All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards & regulations. If in doubt regarding the suitability of use of this product, consult Simseal® for further advice.

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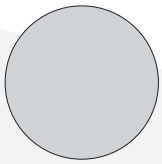
Recommended Joint Dimensions & Estimated Sealant Consumption*

Joint Width (mm)	6	10	12	20	25
Backer Rod diameter	10	13	16	25	30
Backer Rod recess below surface	12	12	12	16	24
Sealant Thickness	6	6	6	10	12
Sealant recess below surface	6	6	6	6	12
Est. linear meter/liter	24	16	12	5	3
Joint Width (inches)	**1/4**	**3/8**	**1/2**	**3/4**	**1**
Backer Rod diameter	3/8	1/2	3/8	1	1¼
Backer Rod recess below surface	1/2	1/2	1/2	3/8	1
Sealant Thickness	1/4	1/4	1/4	3/8	1/2
Sealant recess below surface	1/4	1/4	1/4	1/4	1/2
Est. linear feet/US gallon	275	185	140	60	35

* For road surfaces scheduled for future grinding, it is imperative that the sealant and backer rod installation accommodates a final sealant depth of approximately 9.35 mm (equivalent to 3/8 inch) below the road surface post-grinding. An extra margin is advised to account for minor surface irregularities at the base and to create space for potential upward displacement of old sealant during summer rehabilitation efforts.

COLOURS

Black



Light Grey

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