

Spectrem 900SL

Traffic-Grade Self-Leveling Silicone Sealant

Description

Spectrem 900SL is a low modulus, self-leveling, single-component, cold applied, moisture-cure, silicone sealant ideal for highway, airport & parking structure joints where high movement capability is needed.

Technical Summary

- Spectrem 900SL is an easy to use, gun-grade silicone sealant that is self-leveling for ease of installation on horizontal surfaces.
- No mixing is required. Spectrem 900SL is always ready to use for immediate application with conventional caulking or highway sealing pump equipment
- The low modulus and high movement characteristics of Spectrem 900SL make it suitable for sealing the most demanding dynamically moving joints typical of highway and bridge construction.

Application Summary

- Application with conventional caulking or air powered highway sealing pump equipment.
- No priming required
- Can be used to seal horizontal sawn joints in concrete & asphalt.

Typical Applications

Spectrem 900SL has been formulated as a traffic-grade sealant for a variety of applications where high movement occurs:

- Highways
- Airport joints
- Bridge joints
- Parking structures

Product Compliance

ASTM C920 Standard Specification for Elastomeric Joint Sealants

ASTM D5893 Standard Specification for Cold-Applied, Single-Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Advantages

- Self-leveling for ease of installation
- No primer required
- No mixing required
- Joint movement capability of +100 / -50%
- Weather & UV Resistant
- Resistant to intermittent exposure to jet fuel
- Skin over time of between 30 and 80 minutes @ 25°C
- Can be used to seal concrete and asphalt joints
- Self-leveling which eliminates the need for tooling.

Design Criteria

Spectrem 900SL exhibits self levelling and high movement characteristics designed to allow for the sealing of joints between 6mm and 25mm in concrete and asphalt. This sealant can be applied to horizontal joints typical of highway and bridge construction.

Compatible Materials

Substrates: Concrete and asphalt.

System components: Can be used as a standalone product or as part of the Hychem™ PNS System.

Applicator Material List

Spectrem 900SL, caulking gun, or air-powered highway sealing pump equipment, closed cell backing rod.

Product Data

Characteristic	Result
Appearance	Limestone standard grey Special colours available on request

**Traffic-Grade Self-Leveling Silicone Sealant****Technical Data**

Samples were prepared and tested in a laboratory at a temperature of 25°C and 50% relative humidity.		
PERFORMANCE CHARACTERISTIC	TEST METHOD	TEST RESULTS
AS SUPPLIED		
Flow, Sag, or Slump	ASTM C639	Self-levelling
Extrusion Rate		10 to 14 seconds per 20g at 414 kPa
Specific Gravity		1.3
Skin time (at 25°C, 50% RH)	ASTM C679	30 to 80 minutes
Cure time (at 25°C, 50% RH)		14 Days (full cure)
Full Adhesion (at 25°C, 50% RH)		14 to 21 Days
AS CURED AFTER 7 DAYS AT 25°C, 50% RH		
Elongation	ASTM D412	1000%
Joint movement capability (at +100 / -50% for 10 cycles)	ASTM C719	No failure
Adhesion to Concrete, Minimum Percentage Elongation	ASTM C794	+600 %

Application Data

Property	Property Value
Suitable application methods	Caulking by hand, or pumping with an air-powered pump
Application temperature	4°C and rising
Service Temperatures	-30°C to +50°C
Mixing ratio	No mixing required
Joint width	6mm to 25 mm For joint widths >25 mm contact Hychem™ Infrastructure Technical Support
Return to service (at 25°C, 50% RH)	30 to 80 minutes Joints can be returned to service once sealant has skinned over

Joint Dimensions

Spectrem 900SL is suitable for concrete and asphalt joints between 6 mm and 25 mm wide. Intermediate joint dimensions should maintain the applicable width-to-depth ratio shown above. For joint widths greater than 25 mm, contact Hychem™ Infrastructure Technical Support for advice.

Joints must be sufficiently deep to accommodate the backer rod and sealant while allowing the sealant to be recessed 6–9 mm below the pavement surface.

JOINT WIDTH	JOINT DEPTH	WIDTH-TO-DEPTH RATIO
6 mm	6 mm	1:1
10 mm	10 mm	1:1
15 mm	10 mm	1.5:1
20 mm	10 mm	2:1
25 mm	12.5 mm	2:1

Application Guidelines**SURFACE PREPARATION****Concrete**

New concrete must be allowed to cure for a minimum of 7 days before applying Spectrem 900SL. All existing sealant and contaminants must be completely removed from existing joints with a high-pressure water wash followed by sand blasting to remove residual laitance and provide a mechanical key for the subsequent sealant. New concrete joints should be fresh saw cut, sand blasted and blown clean with oil free compressed air. For good adhesion, the prepared joint interface must be sound, clean, dry and free from dust, cement powder / paste and other contaminants.

Asphalt

New asphalt must be given sufficient time to cool and cure as determined by the mix design. Joints must be saw cut to the specified width & depth. Freshly cut joints must be high-pressure water washed to remove loose, unsound materials



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followed by sand blasting the dry joint. Blow prepared joints clean with oil free compressed air. All joints to be sealed must be sound, clean & dry.

APPLICATION

Joint Backing

After final cleaning, backer rod must be installed to the correct depth. Closed cell polyethylene backer rods are preferred as joint backing to control depth of sealant bead. Where depth of joint will prevent use of joint backing, an adhesive backed polyethylene tape must be installed to prevent three side adhesion. Install backer rod to the correct depth required. Joint backing must be dry at time of sealant application. Backer rod diameter should be approximately 25% greater than the joint width to ensure snug fit & seal in joint.

Priming

No priming required

Mixing

As a single component sealant, Spectrem 900SL does not need any mixing prior to the application.

Placement

Spectrem 900SL is easy to apply with conventional caulking or air powered highway sealing pump equipment. Apply sealant with gun nozzle into the joint so that the joint reservoir is filled to the designed level in one pass, from the bottom in order to avoid trapping air beneath the sealant. If additional sealant is required in low sections, it should be added as soon as possible. At 25°C, 50% R.H. a durable skin will form within 60 minutes.

Finishing and cleaning

Spectrem 900SL does generally not require tooling. Sealant should be recessed 6mm to 9mm below pavement surface to avoid direct contact with wheels rolling over the joint. Cleaning can be accomplished with solvents such as IPA,

xylol, or MEK while sealant is in an uncured state.

Quality Control

The execution of the work shall be carried out in accordance with the project quality plan.

Limitations

The concrete / pavement should be designed and joints sized so the maximum extension and compression do not exceed +100 and -50 % respectively.

Application:

Do not apply to damp, or contaminated surfaces. Not intended for continuous water immersion. Use with adequate ventilation.

If any doubts arise concerning suitability for use, application temperature or substrate conditions, contact Hychem™ Infrastructure Technical Support for advice.

Estimating

10 x 10mm joint = 6 meters per 600ml sausage

20 x 10mm joint = 3 meters per 600ml sausage

25 x 12mm joint = 2 meters per 600ml sausage

Packaging

600ml Sausages (20 x 600ml sausages per carton)

17.1 L pails available for special order only

Storage & Shelf Life

The product is to be stored in unopened original packaging for up to 24 months at between 5 - 35°C in a dry storage place that is protected against exposure.





Safety

In an emergency, contact 000, the Poisons Information Centre (13 11 26 within Australia) or a doctor for advice. Please refer to the current SDS (Safety Data Sheet) and follow the prescribed safety precautions and handling procedures for the product.

Warranties and Disclaimers

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