

SONOLASTIC SL 2

Multi-component self-levelling polyurethane sealant

Description

SL 2 is a multi-component, self levelling, elastomeric polyurethane sealant that is mixed and poured in place. When cured, it forms a tough, resilient joint seal that resists penetration, abrasion, and remains flexible when exposed to weather and aging.

Features

Movement capability $\pm 25\%$.

Abrasion resistant.

Penetration resistant.

Resilient.

Service range from -40°C to 82°C .

Available in custom colours.

Self-levelling and slope grades.

Where to use SL 2

Application

- Expansion joints
- Sidewalks
- Pavements
- Decks
- Parking ramps
- Precast double T's
- Cantilever decks
- Warehouses

- Balconies
- Industrial applications
- Location
- Horizontal or sloped
- Interior or exterior
- Substrate
- Concrete
- Metal

Benefits

- Expands and contracts with joint movement.
- Handles pedestrian and vehicular traffic. Withstands pressure from pointed objects.
- Resists permanent deformation.
- Suitable for all climates.
- Can be colour matched to any substrate.
- Provides application versatility.

Packaging

SL 2 is available in 5.67 litre units containing Part A and Part B.

Primer 733

Cans, 473 ml.

Coverage rate of primers is approximately 137 linear metre per 473 ml for a 13 mm deep joint.

Colours

40 standard, stocked colors are available. Refer to the Popular Palette for Sealants and Waterproofing. 463 standard (nonstocked) colors are also available, and custom matching can be done upon request. Refer to the Sonneborn Color Portfolio.

Standards

- Federal Specification TT-S-00227E, Type I, Class A
- Corps of Engineers CRD-C-506, Type I, Class A
- ASTM C 920, Type M, Grade P, Class 25, Use T and M
- Canadian Specification CAN/CGSB 19.24-M90, Classification MCG-1-40-B-L, No. 81031
- Canadian approval for use in establishments that handle food
- USDA approval for use in areas that handle meat and poultry

Typical properties of cured sealant*

* Properties listed are only for guidance and are not a guarantee of performance.

Property	SL 2	SL 2 Slope Grade
Movement capability ASTM C719	± 25	± 25
Tensile strength ASTM D412	125 psi	145 psi
Elongation ASTM D412	240%	225%
Shrinkage	Nil	Nil
Low temperature flexibility (-26°C) ASTM C793	Passes	Passes
Service temperate range (-40°C to 82°C)	Passes	Passes
Stain and colour change (no visible stain) ASTM C510	None	None
Extrusion rate and application life ASTM C603	Passes	Passes
Rheological (flow) at 49°C ASTM C639	Self-levelling	-
Hardness (Shore A) at standard conditions ASTM C661	30	30

Hardness after heat aging (Maximum shore A 50) ASTM C661	40	20
Tack-free time, hours (maximum 72 hours) ASTM C679	<24	<24
Bond durability on concrete ASTM C719	Passes#	Passes#
Weight loss after heat aging ASTM C792	5%	5%
Cracking & chalking after heat aging ASTM C792	None	None
Artificial weathering Xenon Arc, 250 hours, ASTM C793	Passes#	Passes#
Artificial weathering Xenon Arc, 2000 hours, ASTM G26	No surface cracking	No surface cracking
Adhesion in peel, on concrete ASTM C794	Passes#	Passes#

Primed for water immersion dictated by ASTM C920

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

For best performance

- Do not allow SL 2 sealants to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured
- Sonolastic 150 with VLM Technology or 150 Tint Base.
- SL 2 is not intended for continuous immersion in water. Contact Technical Service for recommendation.
- For slopes up to 12% use SL 2 Slope Grade. For slopes over 12% use NP 2sealant.

- Backer-rods, joint fillers, or bondbreakers must be tight to the sides of the joint to prevent loss of sealant through the bottom.
- 1. For joints subject to puncture by high heels or umbrella points, a stiffer or higher density backup material is required. Cork or rigid non-impregnated cane-fiber joint fillers are suitable. Separate materials from the sealant by a non-adhering bondbreaker (polyethylene tape).
- 2. Do not use other caulks or sand as a bottom bed in a joint.
- 3. Do not install when rain is expected before the sealant reaches initial cure (about 12 hours).
- 4. Units of SL 2 are pre-measured; do not use partial units.
- 5. SL 2 may yellow in the presence of unvented artificial heat; this is a surface phenomenon that does not affect sealant performance.
- 6. Use only Sonolastic color packs intended for use with SL 2.
- 7. Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (+971-4-8851000) to verify the most current version.
- 8. Proper application is the responsibility of the user. Field visits by Degussa personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- 2. The depth of the sealant should be $\frac{1}{2}$ the width of the joint. The maximum depth is 13mm regardless of joint width and the minimum is 6mm.
- 3. In deep joints, the sealant depth must be controlled by Closed Cell Backer-Rod or Soft Backer Rod. Where the joint depth does not permit the use of backer-rod, a bondbreaker (polyethylene strip) must be used to prevent three-point bonding.
- 4. To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it length-wise. Closed-Cell Backer-Rod should be about 3 mm larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. Backer-Rod becomes an integral part of the joint. The sealant does not adhere to it, and no separate bondbreaker is required. Do not prime or puncture the backer-rod.

Surface preparation:

- 5. It is essential that joints be clean and dry. Joint surfaces must be structurally sound, fully cured, and free of all loose aggregate, paint, oil, grease, asphalt.
- 6. Wax, mastic compounds, waterproofing compounds, form release materials, curing compounds or any other contaminants.
- 7. New concrete: Remove all loose material from joints by wire brushing. Sandblast surfaces in contact with form release agents. New concrete must be fully cured. Laitance must be removed by abrading.
- 8. Old concrete: For previously sealed joints, remove all old material by mechanical means. If joint surfaces have absorbed oils,

Directions for use

Joint preparation:

- 1. The number of joints and the joint width should be designed for a maximum of $\pm 25\%$ movement.

remove sufficient concrete to ensure a clean surface.

9. Priming:

1. Joint surfaces must be primed with Primer 733 before sealing. If the surfaces are other than masonry or concrete, test first to determine adhesion. Technical assistance is available from Degussa.
2. Apply primer in a thin, uniform film. Avoid buildup of film.
3. Allow approximately 15–30 minutes drying time before applying sealant. (Primer should be tack free.) Sealant must be applied same day as primer.
4. To minimize contamination of adjacent surfaces, apply masking tape and remove before sealant has begun to thicken and set.

Mixing:

5. SL 2 is a three-component system and must be thoroughly mixed before use. The oversize base container allows for the addition and mixing of Part B and Sonolastic® color pigment into Part A.
6. NOTE: Sonolastic color paks are not added to pretinted SL 2.
7. Transfer Part B to Part A container by cutting open Part B pouch and squeezing out contents. It is imperative that the entire contents of Part B be combined with Part A. (2) With a slow-speed drill and a sealant mixing paddle, thoroughly mix 2–3 minutes. The paddle blade must be kept below the surface of the sealant to avoid whipping in air. (3) Transfer the contents of the Sonolastic® pigment can into the mixed Part A and B. Use a spatula or knife, removing the entire contents to ensure consistent color. (4) Continue mixing with a slow-speed drill and sealant paddle until

color is uniform. During the process, scrape the sides and bottom of the Part A container can and the paddle itself several times.

1. Use 2 Part B and 2 Sonolastic pigment containers for each Part A container. Mix as instructed.
2. Pot life of the sealant is dependent upon temperature.

Application:

3. All caulking and sealing should be performed when temperatures are above 4°C; any moisture or frost on surfaces will adversely affect adhesion.
4. Fill joints from the bottom; avoid bridging of the joint, which may form air voids.
5. For large joints, the self-levelling grade may be poured directly from the can.
6. For smaller joints and for all slope-grade applications, fill the joint by flowing the sealant from a bulk-loading gun.
7. Light tooling of the slope-grade sealant is recommended to smooth out ripples. On sloped surfaces, tool from the lowest point to the highest. Do not use soap or solvent.

Clean up

8. Immediately after use and before sealant has cured, clean equipment with SOLVENT NO. 2 or Xylene.
9. The cured sealant may be removed by cutting with a sharp-edged tool, thin films by abrading.

Curing

Cure time will vary with humidity and temperature. Initial cure is within 24 hours and complete cure takes approximately 7 days.

Cure rates are dependent on temperature and humidity. Protect joint from dirt and traffic until cured.

Table 1	Working Times	
	Standard Conditions	Colder
	23°C	temperatures 4°C
No accelerator	1½ to 2 hours	4½ to 5½ hours
1 accelerator	30 to 45 minutes	1½ to 2 hours
2 accelerator	30 to 45 minutes	1½ to 2 hours
3 accelerator	-	45 minutes to 1 hour

Shelf life

Shelf life of both products is 12 months when stored in unopened containers under normal conditions.

Coverage

Linear Metres per litre

joint width (mm)

Joint depth (mm)	6.4	9.5	12.7	15.9	19.0	22.2	25.4
6	24.8	16.5	12.4	9.8			
10				6.6	5.5	4.7	4.1
13					4.1	3.5	3.0

Health and Safety

SL 2PART A

Warning

SL 2 Part A contains calcium carbonate, toluene diisocyanate, silicon dioxide, titanium dioxide, and mineral spirits (Stoddard type).

Risks

Combustible liquid and vapor. May cause skin and eye irritation. Inhalation of vapors may

cause irritation and intoxication with headaches, dizziness and nausea. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. KEEP AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. Keep container closed when not in use. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or product is used in a poorly ventilated area, use NIOSH/MSHA

approved respiratory protection in accordance with applicable federal, state and local regulations. Keep container closed when not in use. Empty container may contain explosive vapors or hazardous residues. All label warnings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if

swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains material listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

64.6–93 g/L, less water and exempt solvents, when products are mixed.

SL 2 PART B

Warning

SL 2 Part B contains toluene diisocyanate mix.

Risks

May cause eye, skin or respiratory irritation.
May cause dermatitis and allergic reactions.
Potential skin and/or respiratory sensitizer.

Precautions

KEEP OUT OF THE REACH OF CHILDREN.
Prevent contact with skin, eyes or clothing.
Wash thoroughly after handling. DO NOT take internally. Ingestion may cause irritation. Use only with adequate ventilation. Keep container closed. Inhalation may cause irritation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. All label warnings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

8.09 g/L, less water and exempt solvents.

SL 2 ACCELERATOR

Caution

SL 2 Accelerator contains mineral oil and 2-ethylhexanoic acid.

Risks

May cause skin, eye or respiratory irritation.
May be absorbed through skin. May cause dermatitis and allergic reactions. Ingestion may cause irritation. Repeated or prolonged absorption may affect the kidneys.

Precautions

KEEP OUT OF THE REACH OF CHILDREN.
Prevent contact with skin, eyes and clothing.
Wash thoroughly after handling. DO NOT take internally. Use only with adequate ventilation.

Inhalation may cause irritation. Keep container closed. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product does not knowingly contain materials which are known to the state of California to cause cancer, birth defects, or other reproductive harm.

VOC Content

0 lbs/gal or 0 g/L, less water and exempt solvents.

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