Spray-Lock®
CONCRETE PROTECTION

PRODUCT DATA SHEET **SCP 578**

5959 Shallowford Road, Ste. 405
Chattanooga, TN 37421 USA
423.305.6151
SCPTech@concreteprotection.com
concreteprotection.com

SCP 578 is a penetrating colloidal silica concrete treatment that is spray-applied on existing concrete. SCP 578 is a permanent alternative to traditional moisture mitigation systems.

TYPICAL APPLICATION RATE

Concrete
200 ft² per 1 gallon
(4.9 m² per 1 liter)

PERFORMANCE

Test Method Standard	Typical % Improvement
ASTM E96 WATER VAPOR TRANSMISSION	70%
EN 12390-8 DEPTH OF HYDROSTATIC PEN.	70%

ABOUT THIS PRODUCT

When applied to porous concrete, SCP 578 penetrates into the concrete, filling the accessible pore space with naturally occurring concrete reaction product. This action reduces the water vapor transmission to levels low enough for even the most moisture-sensitive flooring materials.

SCP 578 is formulated to penetrate into a prepped, clean, porous surface. SCP 578 is a one-time application moisture management product that does not need to be re-applied for the life of the concrete. Since SCP 578 works within the concrete, demolition of existing flooring or other construction practices can be performed without compromising the moisture control. SCP 578 is not a bond breaker because it works within the concrete and does not stay at the surface of the concrete.

Recommended Equipment for Applications

Important: The use of centrifugal pumps is not recommended.

Use a low to medium pressure sprayer complete with an extension wand and fan tip spray size of 0.024-0.031 inches (0.61-0.79 mm) for flatwork applications.

Alternate spray system: Use an agricultural sprayer using an approximate 5 gallons per minute (18.93 liters per minute) diaphragm pump and fan tip spray size of 0.50-1.0 gallons per minute (1.89-3.79 liters per minute) for flatwork applications. A backpack or Hudson type sprayer should be used if only applying one bucket or fewer of material.

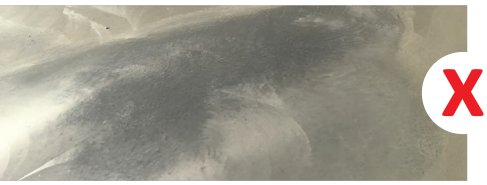
Recommended Application Method

Important: Spray in a 50% overlapping pattern.

For slab applications, hold wand perpendicular to the surface and spray 6 inches (15 cm) from the surface. Apply product using the prescribed application rate for the area. If pooling or dry areas are observed while applying, use a broom to distribute material so that the product remains uniform throughout the application area. Do not allow excess material to dry on the slab. Remove excess SCP 578 with a foam squeegee, wet-vac, or mop.

Note: Product not removed from the slab may become slippery in a wet condition.

Treatments should extend beyond the proposed treatment area to the nearest control or construction joint.



Surface Preparation

The concrete surface needs to be structurally sound. If there are any concerns, consult with an engineer on the project or consult with a structural engineer. Any weak or degraded concrete surface or concrete exhibiting signs of scaling, delamination, or spalling must be mechanically removed to achieve a solid substrate. The concrete should be free of contaminants such as dirt, wax, oil, grease, curing compounds, adhesives, paint, or any other material that could prohibit SCP 578 from entering the concrete matrix. SCP 578 needs a porous (open-matte) finish to penetrate into the concrete and perform as intended. The surface may need to be mechanically opened (e.g. surface grinding, shot blasting, etc.). SCP recommends utilizing ASTM F710 for floor preparation. SCP recommends following the flooring manufacturers' recommendations for installation of flooring including environmental conditions.

Water Absorption Testing

Always perform a water absorption test to determine if SCP 578 will be able to penetrate into the concrete surface. There are standards that describe a method for testing water absorption, such as ASTM F3191. An alternative would be to outline a penny with a pencil and place 5 drops of water inside the marked outline. Monitor the water to see if the water is penetrating into the concrete or moving outside the outline. After two (2) minutes, the water should be absorbed into the concrete without having any bubbling or sheen when viewing the area. The contractor is responsible for choosing the test method and quantity of testing.

Topically Applied Concrete Products

Curing compounds (ASTM C309 or ASTM C1315 products) or topical surface sealers need to be removed prior to the application of SCP 578.

ENVIRONMENTAL CONDITIONS

Hot Weather

One of the challenges of hot weather applications is rapid evaporation and unwanted gelling. SCP recommends pre-wetting concrete when surface temperature is above 90°F (32.2°C). Pre-wetting consists of spraying a light coat of water directly in front of the SCP 578 application. This process helps in preventing rapid evaporation of SCP 578 from the surface of the slab, allowing for better penetration into the hot concrete. SCP 578 should be removed before allowing to dry on the slab.

Cold Weather

Challenges faced during cold weather applications include low temperature application and shorter days. The minimum air and concrete temperature at which SCP 578 can be applied is 35°F (1.7°C) and rising.

Rain Event

A rain event is defined as liquid precipitation that is sufficient enough to cause standing water on the concrete structure. If a light mist is observed that causes no standing water, this is not considered a rain event and application does not require interruption.

If a rain event begins during an application, the portion of the slab that has been treated and squeegeed off is considered treated. If a portion of the slab is being treated and not squeegeed when it rains, SCP 578 will need to be reapplied after rain the has stopped. Mark the area last treated so that you have a reference on where to resume application after the rain event. After rain has stopped, the slab should be squeegeed to remove all standing water. Application can continue as normal, beginning after the last treated section of the slab.

PRODUCT ATTRIBUTES

Color
Cloudy White

Odor
None

Specific Gravity
1.10

pH
11.5 +/-

Flammability
0 (non-flammable)

VOC/VOS Content
0.0 g/mL

Clean-up Solvent
Water

Environmental Impact
None/Neutral

User Status
Friendly

POST-APPLICATION

Traffic

Areas can be accessed by foot and vehicle traffic within 1 to 3 hours of treatment.

NOTES

- SCP 578 may etch glass, shiny aluminum, and brass if left to dry on the surface. Simply remove while wet.
- ***DO NOT*** apply on frozen substrate.
- Joints, cracks, and penetrations should be addressed separately as part of the overall waterproofing plan. ASTM F710 addresses how to handle any cracks and joints in a slab. SCP recommends using a waterproof product meant for the joint or crack and is approved under the flooring as well. For penetrations (any hole that penetrates through the concrete), SCP recommends a water stop material around them.

Packaging/Storage

SCP 578 is packaged in 5-gallon pails, 20-liter pails, 55-gallon drums, and multi-gallon totes. Product shall ideally be stored in a location that is dry and between 35°-100°F (2°-38°C) ambient temperature. Optimal storage is at the middle of the temperature range. Protect from freezing and direct sunlight. 5-year shelf life under proper storage conditions.

General Information

For safe handling information on this product, see the Safety Data Sheet (SDS).

Product Warranty

SCP warrants the product to be free from material defects provided that the product was sold within its identified shelf life and stored according to guidelines on product packaging. SCP's sole liability shall be limited to the purchase price paid by the customer for SCP 578 for the quantity of defective material.

Mock-ups, testing, or sample applications to determine fitness of products for a particular use are the responsibility of the user. In-house and independent testing supports the instructions and claims made in this document. Due to the variation in job conditions, surface preparations, concrete substrates, and application methods, SCP cannot ensure uniformity in product performance.

QUESTIONS? 423.305.6151
SCPTech@concreteprotection.com

NOTE TO SPECIFIER: Be sure to obtain the latest version of this Guide Specification.

This Guide Specification is not a completed document ready for use. It must be edited (i.e., deleting, adding, or modifying text) as required to suit project requirements.

The design professional and the contracting parties of the Contract Documents are responsible for the accuracy of issued project specifications, including use of this SCP™ Guide Specification.

Contact SCP™ for instructions for other applications not included in this specification.

SCP™ (SPRAY-LOCK CONCRETE PROTECTION™) SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF THE USE OF THIS GUIDE

CSI 3-PART SHORT-FORM GUIDE SPECIFICATION

EDIT TO SUIT PROJECT REQUIREMENTS

SECTION

SCP™ SPRAY-APPLIED COLLOIDAL SILICA CONCRETE TREATMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes SCP™ spray-applied, penetrating, colloidal silica concrete treatments and substrate protection for existing concrete.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation meeting: SCP™ personnel or approved representative should be in attendance, in-person or by phone, at the preinstallation meeting to discuss the requirements for slab preparation and product application.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Sample Warranty: For special warranty.

1.4 QUALITY ASSURANCE

A. Material Requirements: Concrete mixes need to be Portland cement based and designed in accordance with ACI and ASTM requirements.

B. Manufacturer Qualifications: ISO 9001 Certified Manufacturer with a minimum 5 years' experience and capable of providing field service representation;

C. Applicator Qualifications: SCP™ confirmation of successful application training.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery, storage, and handling shall be according to the manufacturer's written recommendations, industry guidelines, and/or Division 01 requirements whichever is more stringent.

1.6 FIELD CONDITIONS

A. Environmental Requirements per manufacturer's written recommendations, Division 01, and as follows:
1. Allow surfaces to attain a temperature of 35 deg F (1.7 deg C) and rising before proceeding with product application.
2. Product should not be allowed to freeze.
3. Protect application surfaces during periods of exposure to high winds.
4. Surfaces to be treated should not be frozen or have frost on them. In addition, standing water should be removed prior to treatment.
5. Surfaces over 90 deg F and Direct Sunlight Conditions: Spray a fine mist of water on the surface before the application of SCP™ treatment to help alleviate premature chemical reaction and/or drying from taking place prior to achieving maximum penetration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. SCP™ Spray-Applied Penetrating Colloidal Silica Concrete Treatment Performance:
1. ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials: Treated, normal strength concrete typically provides at least a 70% reduction of water vapor from untreated concrete.
2. EN 12390-8 Testing hardened concrete: Depth of penetration of water under pressure: Treated, normal strength concrete a typically provides at least a 70% reduction of penetration from untreated concrete.

NOTE TO SPECIFIER: Retain or revise paragraph and subparagraphs below for USGBC LEED v4 requirements.

B. Low-Emitting Materials:
1. General Emissions Evaluation: Building products shall be tested and determined compliant according to California Department of Public Health (CDPH) Standard Method v1.2–2017, using the applicable exposure scenario.

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide spray-applied products by Spray-Lock Concrete Protection, LLC, 5959 Shallowford Road, Suite

405, Chattanooga, TN 37421; (office) 423.305.6151 / (fax) 423.305.6150; www.concreteprotection.com

B. SCP™ penetrating colloidal silica concrete treatments shall conform to the information provided in the most current product data sheet supplied by Spray-Lock Concrete Protection.

2.3 ACCESSORIES

A. Large Surface Areas and/or Volumes: Low-pressure, high-volume sprayer less than 100 psi (0.69 MPa), or medium-pressure airless sprayer less than 500 psi (3.4 MPa). Please refer to the manufacturers Product Data Sheet for more information on sprayer requirements and additional equipment.

B. Small to Medium Surface Areas and/or Volumes: Pump or backpack sprayer for areas under 1000 sq ft (9.3 sq m), or sprayers indicated for large surface areas above.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare according to SCP™'s written instructions.

3.2 APPLICATION

A. Apply using the SCP™'s written instructions.

END OF SECTION

SCP 578

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Date of issue: 08/27/2015 Revision date: 02/12/2021 Version: 1.7

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : SCP 578

Substance name : Amorphous Colloidal Silica

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Concrete treatment

1.3. Details of the supplier of the safety data sheet

Spray-Lock, Inc.
5959 Shallowford Road Suite 405
Chattanooga, TN 37421 - USA
T 423-305-6151
info@spraylock.com

1.4. Emergency telephone number

Emergency number : +1 (423) 305-6151

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

None.

SECTION 3: Composition/information on ingredients

3.1. Substance

Proprietary Formula

Name	Product identifier	%
Silicon Dioxide	(CAS No) 7631-86-9	< 50
Water	(CAS No) 7732-18-5	> 70

3.2. Mixture

This mixture does not contain any substances to be mentioned according to Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not a normal route of exposure.

Symptoms/injuries after skin contact : May cause skin irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : Not a normal route of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not combustible.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

6.2. Methods and material for containment and cleaning up

For containment : Stop leak, if possible without risk.

Methods for cleaning up : Dilute spill directly with plenty of water and drain to sewer.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke.

Hygiene measures : Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Protect from sunlight. Do not freeze. Store at temperatures between 2 °C (35 °F) and 38 °C (100 °F).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

None

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : None necessary under normal conditions of use. Wear gloves if handling large quantities.

Eye protection : Wear eye protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Cloudy

Color : White

Odor : Odorless

Odor threshold : Not applicable

pH : 11.2 - 11.5

Melting point : 0 °C (32 °F): Water / 1,713 °C (3,115 °F) Amorphous Silicon Dioxide

Freezing point	:	0 °C (32 °F): Water
Boiling point	:	100 °C (212 °F): Water
Flash point	:	Not applicable
Relative evaporation rate (butylacetate=1)	:	0.3
Flammability (solid, gas)	:	Not flammable
Explosive limits	:	Not applicable
Explosive properties	:	Not applicable
Oxidising properties	:	Not applicable
Vapor pressure	:	3.1690 kPa @ 25°C (0.0313 iatm @ 77°F)
Relative density	:	1.10
Relative vapor density at 20 °C	:	1.73 x 10^{-5}
Solubility	:	Not applicable
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 2,000 °C
Viscosity, kinematic	:	24 cSt @ 25 °C (77 °F)
Viscosity, dynamic	:	26 cP @ 25 °C (77 °F)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Acids.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

SCP 578	
LD50 oral rat	No data available
LD50 dermal rabbit	No data available
LC50 inhalation rat	No data available

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	:	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met.
Carcinogenicity	:	Based on available data, the classification criteria are not met.
Reproductive toxicity	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met.
Aspiration hazard	:	Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Not a normal route of exposure.
Symptoms/injuries after skin contact : May cause skin irritation.
Symptoms/injuries after eye contact : May cause eye irritation.
Symptoms/injuries after ingestion : Not a normal route of exposure.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No known significant effects or critical hazards.

12.2. Persistence and degradability

SCP 578	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

SCP 578	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No information available

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. This material is not subject to RCRA, EPCRA, CERCLA regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

Not regulated for transport

Additional information

Other information : No information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. US State regulations

SCP 578	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Date of issue : 08/27/2015
Revision date : 02/12/2021
Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

31-SDS-SCP-578
Date: 05/05/2021
Rev.: 1.7

Spray-Lock Concrete Protection®
SCP 578 Waterproofing Warranty

Rev. G 01/16/2026

Limited Warranty

Spray-Lock Concrete Protection (SCP) will warrant installed systems against separating from the concrete substrate due to water migration or moisture vapor transmission through the concrete in the specific area(s) where SCP product was applied for a period of fifteen (15) years from date of substantial completion of the project. This warranty is void if SCP's application instructions or any other technical information stipulated in SCP's documentation were not strictly followed.

This limited warranty is for the sole and exclusive remedy of purchaser for any claim concerning this product, including, but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise covers against failures due to concrete water and subsurface water transmissions through the parent concrete, but not from topical surface intrusion, transfer and/or migration from an untreated external source such as flooding, or seepage through concrete via joints, wall joints, structural cracks, and/or other contiguous untreated areas of the facility. SCP products warranty is valid on SCP-treated concrete with moisture readings up to 20 lbs./1000 ft^2/24 h and/or 100% relative humidity.

By this limited warranty, SCP agrees that should the SCP treatment fail due to water migration or alkalinity (up to pH of 14); SCP will repair and/or replace, at its expense including direct labor and materials affected in the SCP treatment area, the SCP treatment and the following:

1) SCP will be involved in the repair work; proposed costs for labor and material costs shall be submitted to SCP for review and approval. Flooring systems will be replaced based on current pricing for the same materials or equivalent at SCP's discretion.
2) This applies only to the installed system as originally applied and only to that portion of the system which is affected by the defect between closest transitions. SCP will not be responsible for the replacement of any portion of the installation that is not defective, regardless of whether such non-defective portions are replaced for cosmetic or other such reasons.

This limited warranty is further subject to the following conditions:

1. SCP products must be applied according to SCP application specifications, with application records kept by applicator or contractor and made available to SCP upon request, on structurally sound and clean areas in which the concrete is fit-for-purpose for application and meets acceptable industry standards as defined in the current editions of ACI 318 and 201. If the areas to which the products are applied now or in the future fail to meet these requirements, the limited warranty shall be void.
2. This limited warranty shall be void if a waterproofing admixture or moisture vapor reducing admixture (MVRA) is utilized in the concrete or another moisture remediation product is used prior to the installation of this product.
3. The limited warranty shall be void if a cohesive substrate failure at the concrete surface occurs resulting in an installed system failure, the concrete surface has been treated with any kind of waterproofing and/or penetrating sealer prior to SCP product application, and/or has alkali-aggregate reaction (AAR) conditions causing failure, surface scaling, and/or bond-inhibiting contaminants are present. Any topical surface sealer or curing compound used on the concrete not removed prior to application will void this warranty. Cracks and joints are not covered by this limited warranty.
4. The limited warranty shall be void if substrate concrete is determined, through independent forensic examination, to have not met the project specifications or engineer-approved mix design in any required constituent percentage within the tolerances allowed by ASTM C94 (for ready mixed concrete) or applicable ASTM/PCI for precast concrete.
5. The limited warranty shall be void if SCP products have been improperly applied by the applicator.
6. This limited warranty shall be void if the account is not paid in full by 60 days from the date of purchase. For special considerations that prove to be necessary on large projects or any other requested accommodations documentation must be on-file with SCP Customer Service.
7. SCP makes no other warranty, expressed or implied, and is not responsible for substandard concrete workmanship or practices in placing, or finishing. SCP is not responsible for substandard slab preparation and/or flooring installation. SCP shall be entitled to legal fees, costs, and expenses, in defending and enforcing this warranty against the purchaser, end-user, and others, regardless of any local law or ordinance that prohibits such entitlements.
8. SCP Limited Bond Warranty- SCP offers a limited bond warranty on the treated concrete surface. The floor preparation of the treated concrete for flooring installation must meet current *ASTM 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring*. The limited warranty will be for the period described above. Failure to follow ASTM F710, have a properly performed and documented bond test, and the adhesive manufacturer's specific installation guidelines including but not limited to; ambient and concrete temperature, concrete pH, compatibility with the flooring components, and acclimation of the installation space will completely void this limited bond warranty.

Subject to all the conditions described herein, provided that SCP product has been made available and installed according to SCP guidelines, SCP will be responsible for reinstatement of the systems as listed above, which results from a breach of this limited warranty caused by a defect as described herein. The account related to this limited warranty must be paid in full prior to the limited warranty being effective. Any claim under this warranty must be first presented in writing to SCP. Any action in regard hereto or arising out of the terms and conditions hereof shall be instituted and litigated in the courts of the state of Tennessee in Hamilton County, Tennessee or any federal court sitting therein and no other. In accordance herewith, the parties hereby submit to the jurisdiction and venue of such courts and waive any objection that such courts are an inconvenient forum. The parties hereby waive the right to a jury trial in any action, proceeding or counterclaim arising out of or related to this limited warranty. In no event shall SCP be liable for any special, incidental, consequential, or punitive damages, including loss of profits and use.

The recipient of the limited warranty must provide SCP a written notice within thirty (30) days after the discovery of a breach of this limited warranty in order to assert its right to any repairs covered by this limited warranty. Claims shall be addressed to 5959 Shallowford Road, Suite 405, Chattanooga, TN 37421, Attn: Technical Director.

AIRL Project: 336242
1550 37th Street, NE
Cleveland, TN 37312

Brent Bergherm
Spray-Lock Concrete Protection, Inc.
5959 Shallowford Road, Suite 405
Chattanooga, TN 37421

Subject: Project 336242 - Test Results

Thank you for choosing AIRL, Inc, and its ISO/IEC 17025 accredited testing laboratory, for your analytical needs. Spray-Lock's product "SCP 578" was tested by our laboratory for low emitting materials.

Testing was conducted in small environmental chambers following the principles of ASTM D 5116 with the defined product specific test protocols and IAQ emission requirements of the State of California's Indoor Air Quality Program, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers" (aka CA Section 01350).

Calculations were performed using the parameters below to estimate the concentrations of VOCs of concern for use in a classroom environment and in an office environment.

Ventilation Rate	Room Volume	Product Surface Area
CLASSROOM		
0.82 air changes per hour (ACH)	12.2 m x 7.32 m x 2.59 m=231 m^3 (40 x 24 x 8.5 ft = 1,080 ft^3)	119 m
PRIVATE OFFICE		
0.68 air changes per hour (ACH)	3.66 m x 3.05 m x 2.74 m = 30.6 m^3 (12 x 10 x 9 ft = 1,080 ft^3)	37.8 m

The product mentioned above as received and tested meets the Section 1350 requirements for use in a classroom and in an office with the above parameters.

If you have any questions or concerns about the test results, please contact Roy Patterson at (423) 476-7766.

Sincerely,

Roy Patterson
Chemistry Laboratory Director

VOC EMISSION RESULTS COMPARISON TO STANDARD

Standard referenced: *CDPH/EHLB/Standard Method V1.2 (January 2017) "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" (aka CA Section 01350).*

PRODUCT SAMPLE INFORMATION

Manufacturer:	Spray-Lock Concrete Protection
Product Description:	SCP 578
Product Type:	Protective Sealants
Sample Identification:	AIRL 336242
Manufactured Date:	8/4/2020
Test Completed on:	11/15/2021

TEST RESULTS COMPARISION TO STANDARD CRITERIA

Environment:	**CLASSROOM**		**OFFICE**	
Surface Area:	**119 m**			**37.8 m**
Criterion:	**Criterion**	**Meets?**	**Criterion**	**Meets?**
Individual VOC:	≤ 1/2 REL	Yes	≤ 1/2 REL	Yes
Formaldehyde:	≤ 9.0 ug/m3 0	Yes	≤ 9.0 ug/m3	Yes

Environment:	**CLASSROOM**		**OFFICE**
Surface Area:	119 m		37.8 m
TVOC:	0.5 mg/m^3 or less		0.5 mg/m^3 or less

TVOC comparison is based on LEED BD+C: New Construction v4 (LEED v4), Indoor environmental quality (EQ) category/Low-emitting materials credit/Emissions and content requirements/General emissions evaluation.
http://www.usgbc.org/node/2614095?return=/credits/new-construction/v4/indoor-environmental-quality

Reviewed By	Roy Patterson Chemistry Laboratory Manager

Disclaimer: This Comparison affirms that: 1) the product sample was tested according to the referenced standard; 2) the measured VOC emissions were evaluated for the defined exposure scenario(s); and 3) if so indicated above that the results meet the criteria of the referenced standard(s). AIRL did not select the samples, determine if the samples were representative of production samples, witness the production of test samples, or were we provided with information relative to the formulation or identification of component materials used in the test samples. The test results apply only to the actual samples tested. The issuance of this Comparison in no way implies Listing, Classification or Recognition by AIRL and does not authorize the use for AIRL Listing, Classification or Recognition Marks or any other reference to AIRL on the product or system. AIRL authorizes the above named company to reproduce this Comparison provided it is reproduced in its entirety. The name, brand or marks of AIRL cannot be used in any packaging, advertising, promotion or marketing relating to the data in this Comparison, without AIRL's prior written permission. AIRL employees and agents shall not be responsible to anyone for the use or nonuse of the information contained in this Comparison, and shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use of, or inability to use the information contained in this Comparison.

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INDOOR AIR QUALITY EVALUATION
FOLLOWING THE REQUIREMENTS OF
CDPH/EHLB/STANDARD METHOD

PREPARED FOR:
SPRAY-LOCK CONCRETE PROTECTION, INC.

MANUFACTURER INFORMATION

Manufacturer	Spray-Lock Concrete Protection
Contact Name and Title	Brent Bergham
Contact Address	5959 Shallowford Road, Suite 405, Chattanooga, TN 37421
Contact Phone Number	423.305.6151 X134

PRODUCT INFORMATION

Product Description	SCP 578
Manufacturer Product ID	Not Provided
Product Category	Protective Sealants
Product Sub-Category	N/A
Manufacturing Location	Not provided
Date Manufactured	August 4, 2020
Date Collected	Not Provided
Date Shipped	Not Provided
Date Received	11/01/21

EXECUTIVE SUMMARY

PROJECT DESCRIPTION

AIRL is an ISO/IEC 17025 accredited testing laboratory, presents the results of its indoor air evaluation of a product identified as "SCP 578" submitted by Spray-Lock Concrete Protection Inc. AIRL conducted this study using a product evaluation test protocol following California's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers" (aka CA Section 01350) (1). Test chamber methodology followed the guidance of ASTM D 5116 (2), volatile organic compound (VOC) analysis followed the methodology in EPA TO-17 (3) and ASTM D 6196 (4), and analysis for low molecular weight aldehydes, including formaldehyde and acetaldehyde, followed the methodology in ASTM D 5197 (5). The definition for total VOCs (TVOC) is from ISO 16000-6 (6). The quantifiable level for all compounds is 2 ug/m^3. All identified target list compounds are quantified using authentic standards. Identified substances not on one of the designated toxics list are quantified using either authentic standards or surrogates and are notated appropriately.

The product was monitored for emissions of TVOC, individual VOCs, formaldehyde and other aldehydes after the 96-hour test period. Measurements were made and predicted exposures were calculated according to the CA Section 01350 protocol. As specified in this protocol, the results at 96 hours, after 10 days of conditioning, were compared to $^1/_2$ (one-half) the current Chronic Reference Exposure Levels (CRELs), as adopted from the California OEHHA list (7). All identified VOCs were also compared to the California-EPA OEHHA Proposition 65 list (8) and the California-EPA Air Resource Board list of Toxic Air Contaminants (TACs) (9).

RESULTS

The calculation parameters and results for the tested product identified as "SCP 578" are shown below:

Environment	Ventilation Rate (ACH)	Room Volume	Product Usage	Product Surface Area	Product Compliance?
Classroom	0.82	12.2 m x 7.23 m x 2.59 m = 231m^3 (40 x 24 x 8.5 ft = 8,160 ft^3)	Solid Surface Seam Sealer	119 m	Yes
Office	0.68	3.66 m x 3.05 m x 2.75 m = 30.6 m^3 (12 x 10 x 9 ft = 1,080 ft^3)	Solid Surface Seam Sealer	37.8 m	Yes

TABLE 1

ENVIRONMENTAL CHAMBER STUDY PARAMETERS
PREPARED FOR: SPRAY-LOCK CONCRETE PROTECTION
TOTAL TEST START DATE AND DURATION: 14 DAYS

PROJECT 336242

Product Description:	SCP 578
Date Received at AIRL:	November 1, 2021
Sample Preparation:	The product was received by AIRL, Inc. via the customer. The sample was visually inspected and stored in a controlled environment immediately following sample check-in. Just prior to loading, a weighted amount was applied to a foil-wrapped plate. The sample was immediately placed inside the environmental chamber, and tested according to the specified protocol.
Conditioning Period:	11/1/21 – 11/10/21
Test Period:	11/11/21 – 11/15/21
Product Area Exposed:	$0.0503 m^2$
Chamber Volume:	$0.0504 m^3$
Product Loading Ratio:	$1.0 m^2/m^3$ rate:
Test Chamber Conditions:	Air change rate: 1.00 ± 0.05 1/h Inlet air flow rate: $0.0504 m^3/h \pm 0.002 m^3/h$ Temperature: 23°C ± 2 Relative Humidity: 50% RH ± 10%

TABLE 2

COMPARISON OF DATA TO CA SECTION 01350 TARGET CRELs
AFTER 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING
TOTAL TEST START DATE AND DURATION: 14 DAYS

PREPARED FOR: SPRAY-LOCK CONCRETE PROTECTION INC
PROJECT SCP 578 336242

Compound Name	CAS Number	1/2 CREL (ug/m3)	Chamber Concentration (ug/m3)	Emission Factor tt (ug/m•hr)	Classroom Predicted Concentration (ug/m3)**	Office Predicted Concentration (ug/m3)**	Meets 1/2 CREL? (Classroom/ Office)
Acetaldehyde	75-07-0	70	BQL <5	BQL			Yes
Benzene	71-43-2	1.5	BQL <1	BQL			Yes
Carbon disulfide	75-15-0	400	BQL<10	BQL			Yes
Carbon tetrachloride	56-23-5	20	BQL<4	BQL			Yes
Chlorobenzene	108-90-7	500	BQL<4	BQL			Yes
Chloroform	67-66-3	150	BQL<4	BQL			Yes
Dichlorobenzene (1,4-)	106-46-7	400	BQL<4	BQL			Yes
Dichloroethylene (1,1)	75-35-4	35	BQL<4	BQL			Yes
Dimethylformamide (N,N-)	68-12-2	40	BQL<10	BQL			Yes
Dioxane (1,4-)	123-91-1	1,500	BQL<4	BQL			Yes
Epichlorohydrin*	106-89-8	1.5	BQL<1	BQL			Yes
Ethylbenzene	100-41-4	1,000	BQL<4	BQL			Yes
Ethylene glycol	107-21-1	200	BQL<4	BQL			Yes
Ethylene glycol monoethyl ether acetate	111-15-9	150	BQL<4	BQL			Yes
Ethylene glycol monoethyl ether	110-80-5	35	BQL<4	BQL			Yes

Compound Name	CAS Number	1/2 CREL (ug/m3)	Chamber Concentration (ug/m3)	Emission tt Factor (ug/m•hr)	Classroom Predicted Concentration (ug/m3)**	Office Predicted Concentration (ug/m3)**	Meets 1/2 CREL? (Classroom/ Office)
Ethylene glycol monomethyl ether acetate	110-49-6	45	BQL<4	BQL			Yes
Ethylene glycol monomethyl ether	109-86-4	30	BQL<4	BQL			Yes
Formaldehyde	50-00-0	9.0'	BQL<5	BQL			Yes
Hexane (n-)	110-54-3	3,500	BQL<10	BQL			Yes
Isophorone	78-59-1	1,000	BQL<10	BQL			Yes
Isopropanol	67-63-0	3,500	BQL<4	BQL			Yes
Methyl chloroform	71-55-6	500	BQL<4	BQL			Yes
Methyl t-butyl ether	1634-04-4	4,000	BQL<10	BQL			Yes
Methylene chloride	75-09-2	200	BQL<10	BQL			Yes
Naphthalene	91-20-3	4.5	BQL<4	BQL			Yes
Phenol	108-95-2	100	BQL<10	BQL			Yes
Propylene glycol monomethyl ether	107-98-2	3,500	BQL<10	BQL			Yes
Styrene	100-42-5	450	BQL<4	BQL			Yes
Tetrachloroethylene (perchloroethylene)	127-18-4	18	BQL<4	BQL			Yes
Toluene	108-88-3	150	BQL<4	BQL			Yes
Trichloroethylene	79-01-6	300	BQL<4	BQL			Yes
Vinyl acetate	108-05-4	100	BQL<4	BQL			Yes
Xylenes (m-, o-, p-)	1330-20-7	350	BQL<12	BQL			Yes

BQL denotes below quantifiable level (instrument calibration using authentic standard).

ttThe emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N_c), the chamber volume (V_c), and the product area exposed in the chamber (AO as: $EF = (CC*V_c*N_c)/A_c$.

*Denotes compound is within volatility range of method but no calibration standard was available.

**The predicted building exposure concentration (BC) is calculated from the emission factor (EF), the building air change rate (N_B), the building room volume (V_B), and the product area exposed in the building room (A_B) as: $BC = (EF*A_B)/(V_B*N_B)$. Prediction based on a standard classroom solid surface seam sealer usage of 119 m in a 231 m^3 room with 0.82 ACH or on a standard office solid surface sealer usage of 37.8 m in a 30.6 m^3 room with 0.68 ACH.

***Guidance value per CA Standard Method

TABLE 3

CHAMBER CONCENTRATIONS AND EMISSION FACTORS FOR TVOC AND FORMALDEHYDE AT 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING TOTAL TEST START DATE AND DURATION: 14 DAYS

PREPARED FOR: SPRAY-LOCK CONCRETE PROTECTION INC PROJECT SCP 578 336242

ELAPSED EXPOSURE HOUR AFTER 10 DAYS CONDITIONING	CHAMBER CONCENTRATION (ug/m^3)	EMISSION FACTORtt (ug/m•hr)
TVOC[1]		
	<25	
Formaldehyde[‡]		
	<5	

BQL denotes below quantifiable level.
Exposure hours are nominal (± 1 hour).
[1]Defined as the sum of those VOCs that elute between the retention times of n-hexane (C_6) and n-hexadecane (C_{16}) on a non-polar capillary
GC column quantified based on a toluene response factor.
Compound identified and quantified by DNPH derivitization and HPLC/UV analysis.
"The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N_c), the chamber volume (V_c),
and the product area exposed in the chamber (AO as: $EF = (CC*V_c*N_c)/A_c$.

TABLE 4

CHAMBER CONCENTRATIONS, EMISSION FACTORS, AND PREDICTED EXPOSURE CONCENTRATIONS FOR THE TVOC & TEN MOST ABUNDANT IDENTIFIED INDIVIDUAL AFTER 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING TOTAL TEST START DATE AND DURATION: 14 DAYS

PREPARED FOR: SPRAY-LOCK CONCRETE PROTECTION INC PROJECT SCP 578 336242

CAS NUMBER	COMPOUND	CHAMBER CONC. (ug/m^3) ---	EMISSION FACTOR[tt] (ug/m•hr)	CALCULATED PREDICTED EXPOSURE CONCENTRATION** (ug/m^3)	
	TVOC (NONE)	<25			

TABLE 5

VOC PREDICTED AIR CONCENTRATIONS AND REGULATORY INFORMATION AT 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING TOTAL TEST START DATE AND DURATION: 14 DAYS

PREPARED FOR: SPRAY-LOCK CONCRETE PROTECTION INC PROJECT SCP 578 336242

CAS NUMBER	COMPOUND IDENTIFIED	CHAMBER CONC. (ug/m^3)	EMISSION FACTORtt (ug/m•hr)	PREDICTED EXPOSURE CONCENTRATION** (ug/m^3)		INDICATES PRESENCE ON LIST		
				Classroom	Office	CA PROP 65	CA AIR TOXIC	CREL
---	none	---	---	---	---	---	---	---

[t]Quantified using multipoint authentic standard curve. Other VOCs quantified relative to toluene.
Compound identified and quantified by DNPH derivitization and HPLC/UV analysis.
[tt]The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N_c), the chamber volume (V_c), and the product area exposed in the chamber (AO as: $EF = (CC*V_c*N_c)/A_c$.
**The predicted building exposure concentration (BC) is calculated from the emission factor (EF), the building air change rate (N_B), the building room volume (V_B), and the product area exposed in the building room (A_B) as: $BC = (EF*A_B)/(V_B*N_B)$. Prediction based on a standard classroom solid surface seam sealer usage of 119 m in a 231 m^3 room with 0.82 ACH or on a standard office solid surface seam sealer usage of 37.8 m in a 30.6 m^3 room with 0.68 ACH.

CAL Prop. 65: California Health and Welfare Agency, Proposition 65 Chemicals
1 = known to cause cancer
2 = known to cause reproductive toxicity

CAL Toxic Air Contaminant:
I) Substances identified as Toxic Air Contaminants, known to be emitted in California, with a full set of health values reviewed by the Scientific Review Panel.
IIA) Substances identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
IIB) Substances NOT identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
III) Substances known to be emitted in California, and are NOMINATED for development of health values or additional health values.
IVA) Substance identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III.
IVB) Substance NOT identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III.
- Substance identified as Toxic Air Contaminants, and NOT KNOWN TO BE EMITTED from stationary source facilities in California based on information from the AB 2588 Air Toxic "Hot Spots" Program and the California Toxic Release Inventory.
- Substances identified as Toxic Air Contaminants, NOT KNOWN TO BE EMITTED from stationary source facilities in California, and are active ingredients in pesticides in California.

Chronic REL: California Office of Environmental Health Hazard Assessment (OEHHA), Chronic Reference Exposure Levels
- = Found in Listing

REFERENCES

- The State of California's Indoor Air Quality Program, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers" Version 1.2. https://archive.cdph.ca.gov/programs/IAQ/Documents/CDPH-IAQ StandardMethod V1 2 2017.pdf.

- ASTM D 5116, "Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products." ASTM, West Conshohocken, PA, 2010.

3. ASTM D 6196 "Practice for the Selection of Sorbents and Pumped Sampling/ Thermal Desorption Analysis Procedures for Volatile Organic Compounds in Air." ASTM, West Conshohocken, PA, 2009.

4. ASTM D 5197, "Test Method for Determination of Formaldehyde and Other Carbonyl Compounds in Air (Active Sampler Methodology)." ASTM, West Conshohocken, PA, 2009.

5. ISO 16000-6, "Indoor air -- Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA sorbent, thermal desorption and gas chromatography using MS/FID," 2004.
http://www.iso.org/iso/iso catalogue/cataloque tc/cataloque detail.htm?csnumber=30147,

6. California Environmental Protection Agency; Chronic Reference Exposure Levels; The Office of Environmental Health Hazard Assessment (OEHHA); http://www.oehha.ca.gov/air/Allrels.html.

7. California Environmental Protection Agency. Safe Drinking Water & Toxic Enforcement Act of 1986 (Proposition 65): No Significant Risk Levels for Carcinogens; Acceptable Intake Levels for Reproductive Toxicants (Status Report). Sacramento: California Environmental Protection Agency; http://www.oehha.ca.gov/prop65/getNSRLs.html.

8. California Environmental Protection Agency. Air Resources Board. Toxic Air Contaminants (TAC) Identification List; http://www.arb.ca.gov/toxics/cattable.htm

9. EPA TO-17, "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air - Second Edition," United States Environmental {Protection Agency, www.epa.gov/ttn/amtic/files/ambient/airtox/to-17r.pdf, 1999.

APPENDIX 2

QUALITY CONTROL PROCEDURES FOR ENVIRONMENTAL CHAMBER EVALUATIONS

AIRL is a testing laboratory that is ISO/IEC 17025 accredited with defined and executed internal and third party verification programs encompassing emission test methods and low level pollutant measurements. AIRL's quality control/assurance plan is designed to ensure the integrity of the measured and reported data obtained during its product evaluation studies. This QC program encompasses all facets of the measurement program from sample receipt to final review and issuance of reports. As a firm with ISO/IEC 17025 accredited testing laboratories, AIRL product control, testing, data handling, and reporting protocols and procedures are standardized and controlled. AIRL participates in proficiency and accreditation measurement programs for as required by the State of California and ISO 17025. Quality Assurance is maintained through AIRL's computerized data management system. An electronic "paper trail" for each analysis is also maintained and utilized to track the status of each sample, and to store the results. A complete quality report can be provided upon request and all test data and analysis procedures are available on site for customer review.

Chamber Evaluations

Supply air purity is monitored on a weekly basis, using identical methodology to the chamber testing. The supply air is assured to contain less than 10 ug/m^3 TVOC, < 2 ug/m^3 total particles, < 5 ug/m^3 formaldehyde, and < 2 ug/m^3 for any individual VOC. Preventative maintenance ensures supply air purity, and corrective action is taken when any potential problems are noted in weekly samples. Supply air filter maintenance is critical for ensuring the purity of the chamber supply air. Chamber background samples are obtained prior to product exposure to ensure contaminant backgrounds meet the required specifications prior to product exposure. Results of this monitoring are maintained at AIRL and available for on-site inspection.

All environmental chamber procedures are in accordance with ASTM D 5116 and meet the data quality objectives required.

Various measures are routinely implemented in a product's evaluation program. These include but are not limited to:

- appropriate record keeping of sample identifications and tracking throughout the study;

- calibration of all instrumentation and equipment used in the collection and analysis of samples;

- validation and tracking of all chamber parameters including air purification, environmental controls, air change rate, chamber mixing, air velocities, and sample recovery;
- analysis of spiked samples for accuracy determinations;

- duplicate analyses of 10% of all samples evaluated and analyzed;

- multi-point calibration and linear regression of all standardization;

- analysis of controls including chamber backgrounds, sampling media, and instrumental systems.