

BLUESTONE PRODUCTS™
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Information Telephone Number
651-905-8137

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Section 1: Product Identification

Product Type: Concrete Sealer

Product Name:

ProSpec® 100% Silane Sealer

Section 2: Hazard Identification

Hazard Risk Classification

This product has been evaluated according to Regulation 29CFR 1910.1200 and classified as:

Flammable liquids

Category 3

H226

Label Elements

Hazard Pictogram(s):



Signal Word: Warning.

Hazard Statements:

H226- Flammable liquid and vapor

Precautionary Statements:

General

Read label before use.

Prevention

Keep away from heat/parks/open flames/hot surfaces – No smoking.

Wear protective gloves/eye protection/face protection.

Keep container tightly closed.

Response

If on skin (or hair): Take off all contaminated clothing immediately. Rinse skin with water. If skin irritation occurs, get medical advice/attention.

In case of fire: Use extinguishing powder, alcohol resistant foam or carbon dioxide to extinguish.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents/container to waste disposal.

Hazards not otherwise classified:

Inhalation of aerosol spray may damage health. The product hydrolyses under formation of ethanol (CAS-Nr. 64-17-5). Ethanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions.

Section 3: Hazardous Ingredients/Composition

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above $\geq 0.1\%$.

Ingredient	Typical Percentage*	CAS #
Octyl triethoxy silane	>90.0%	35435-21-3

*HYD- by-product upon hydrolysis, INHA- ingredient, NEBE- by-product, MONO- residual monomer, VERU- impurity, VUL- by-product upon vulcanization.

*C1- IARC carcinogen, C2- NTP carcinogen, C#- OSHA carcinogen, NH- non-hazardous, R- reproductive toxin.

*Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product. Specific chemical identities and/or exact percentage (concentration) of the composition may have been withheld as a trade secret.

Section 4: First Aid Measures

General information:

Get medical attention if irritation or other symptoms occur. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

Eye contact:

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 minutes.

Skin contact:

For skin contact, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion:

For ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids. Indicate the possible formation of ethanol.

Symptoms of overexposure: None known.

Note to physician: Treat symptomatically.

Section 5: Fire Fighting Measures

Hire and explosion hazards: This material will flash but does not sustain combustion. As a result of hydrolysis flammable vapors may accumulate in the container head space. Consider possible formation of explosive mixtures with air, for example in uncleaned containers by moisture. Explosion limits for hydrolysis product: 3.5-15% v/v (ethanol).

Suitable fire extinguishing media: Carbon dioxide, dry chemical or alcohol resistant foam. Water may be used to cool tanks and structures adjacent to the fire.

Unsuitable fire extinguishing media: Water, halons.

Specific hazards arising from the chemical: Hazardous combustion products- carbon dioxide, carbon monoxide, silicon dioxide and incompletely burnt hydrocarbons.

Firefighting procedures: Firefighters should wear full protective clothing including a self-contained breathing apparatus.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

General precautions: Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. If material is released indicate risk of slipping. Do not walk through spilled material.

Methods and materials for containment: Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible, without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll-free phone number (800) 424-8802.

Methods and materials for cleaning up: Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: Absorb with a neutral (non-acidic / non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts: Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

Further information: Exhaust vapors. Eliminate all sources of ignition. Consider explosion protection. Observe notes under section 7.

Section 7: Handling and Storage

Precautions for safe handling: Ensure adequate ventilation. Must be syphoned off in situ. Spilled substance increases risk of slipping. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Observe information in section 8. Keep away from incompatible substances in accordance with section 10.

Precautions for safe handling: Product may release ethanol. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

Conditions for safe storage including any incompatibilities: Observe local/state/federal regulations.

Further information for storage: Store in a dry and cool place. Protect against moisture. Store container in a well-ventilated place.

Section 8: Exposure Controls/Personal Protection

Occupational exposure limits:

CAS No.	Substance	Type	Mg/m ³	PPM	Dust Fract.
64-17-5	Ethanol	OSHA PEL	1,900.0	1,000.0	N/A

Re Ethanol (CAS no. 64-17-5): STEL is 1000 ppm; carcinogenicity: A3 (ACGIH).

Personal protection equipment (PPE):

Respiratory protection: Respiratory protection is only necessary if long term or high-level exposures are likely to occur. A NIOSH approved air purifying respirator equipped with universal multi-contaminant multi-gas/vapor cartridges is recommended if overexposure to chemical vapors could occur.

Eye protection: Safety glasses with side shields or chemical safety goggles.

Hand protection: Butyl rubber protective gloves.

Other protective clothing or equipment: Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

General hygiene and protection measures: Do not breathe dust/vapor/mist/gas/aerosol. Avoid contact with eyes and skin. Do not eat, drink or smoke when handling. Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Appearance:	Colorless liquid
Odor:	Faint odor
Odor Limit:	No data available.
Flash Point:	14 °C
Boiling Point:	237 °C (760 hPa)
Melting Point:	< -100 °C (1013 hPa)
Thermal Decomposition:	> 150 °C (> 302 °F)
Sustained Combustibility:	105 °C (221 °F)
Ignition Temperature:	251 °C (484 °F)
Lower Explosion Limit:	0.4% (V)
Upper Explosion Limit:	Not determined.
Vapor Pressure:	0.089 hPa / 25 °C (77 °F), 0.532 hPa / 50 °C (122 °F)
Relative Density:	No data available.
Density:	0.88 g/cm ³ at 20 °C (68 °F), at 1013 hPa
Solubility in water:	< 0.00025 g/l virtually insoluble.
pH Value:	Not applicable
partition Coefficient:	n-octanol/water, 6.1 (Log Pow)
Viscosity (dynamic):	1.9 mPa.s at 25 °C (77 °F)
Viscosity (kinematic):	1.98 mm ² /s at 20 °C (68 °F)

Product displays neutral reaction. Solubility in water: Hydrolytic decomposition occurs. Explosion limits for released ethanol: 3.5 - 15%(V).

Section 10: Stability and Reactivity

General information: If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Conditions to avoid: Avoid moisture, heat, open flames, and other sources of ignition.

Materials to avoid: Reacts with water, basic substances and acids. Reaction causes the formation of ethanol.

Hazardous decomposition products: By hydrolysis- ethanol. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

Further information: Hazardous polymerization cannot occur.

Section 11: Toxicological Information

Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.

Octyl triethoxy silane:

11.1.1 Acute toxicity

Assessment:

Based on the available data acute toxic effects are not expected after single oral exposure. Based on the available data acute toxic effects are not expected after single dermal exposure. Based on the available data acute toxic effects are not expected after short-term inhalation exposure.

Product details:

Route of exposure	Result/effect	Species/test system	Source
Oral OECD 423	LD50: >2,000 mg/kg	Rat	Test report
Dermal OECD 402	LD50: >2,000 mg/kg	Rat	Test report
By inhalation (spray) OECD 403	LC50: >11.2 mg/l; 4h No mortality observed at this dose.	Rat	Test report

11.1.2 Skin corrosion/irritation

Assessment:

Based on the available data a clinically relevant skin irritation hazard is not expected.

Product details:

Result/effect	Species/test system	Source
Not irritating	Rabbit	Test report OECD 404

11.1.3 Serious eye damage / eye irritation

Assessment:

Based on the available data a clinically relevant eye irritation hazard is not expected.

Product details:

Result/effect	Species/test system	Source
Not irritating	Rabbit	Test report OECD 405

11.1.4 Respiratory or skin sensitization

Assessment:

Based on the available data a sensitization reaction is not expected from this product.

Product details:

Route of exposure	Result/effect	Species/test system	Source
Dermal report to OECD 406	Not sensitizing	Guinea pig	Maximization test

11.1.5 Germ cell mutagenicity

Assessment:

Based on known data a significant mutagenic potential may be excluded.

Product details:

Result/effect	Species/test system	Source
Negative	Mutation assay (in vitro) bacterial cells	Test report OECD 471
Negative	Chromosome aberration assay (in vitro) mammalian cells	Test report OECD 473
Positive (without metabolic activation)	Chromosome aberration assay (in vitro) mammalian cells	Test report OECD 473
Negative (with metabolic activation)	Chromosome aberration assay (in vitro) mammalian cells	Test report OECD 473
Negative	Mutation assay (in vitro) mouse lymphoma cells	Test report (read across substance) OECD 476
Negative	Micro nucleus assay (in vivo) mouse oral erythrocytes	Test report OECD 474

Positive results only in the presence of cytotoxicity

11.1.6 Carcinogenicity

Assessment:

Based on the available toxicological data no specific evaluation of the carcinogenic potential is scientifically implicated.

11.1.7 Reproductive toxicity

Assessment:

Animal tests have shown no indications of possibility of damage to embryo and impairment of fertility.

Product details:

Result/effect (examinations of fertility disruption)	Species/Test system	Source
NOAEL: >= 1000 mg/kg OECD 422	Screening test, rat, oral,	Conclusion by analogy

Result/effect (examinations of developmental toxicity and teratogenicity)	Species/test system	Source
NOAEL (developmental): >= 1000 mg/kg OECD 414	Developmental toxicity study, rat, oral (gavage); day 6-20 of gestation	Nothing abnormal detected
NOAEL (maternal): >= 1000 mg/kg OECD 414	Developmental toxicity study, rat, oral (gavage) ; day 6-20 of gestation	Nothing abnormal detected

11.1.8 Specific target organ toxicity (single exposure)

Assessment:

For this endpoint no toxicological test data is available for the whole product. For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (repeated exposure)

Assessment:

Based on the available data the criteria for classification as toxic after repeated exposure are not fulfilled.

Product details:

Result/effect	Species/test system	Source
NOAEL: 150 mg/kg	Subacute study rat oral (gavage) 28 d; 7 d/w test report	Test report OECD 407
NOAEC: >= 3 mg/l	Subacute study rat by inhalation (spray) 28 d; 5 d/w; 6 hours/day Follow-up observation period: 14 d test report (read across substance)	Test report OECD 412

Target organs: bladder. The given result is based on an evaluation of the whole database for this endpoint ("weight of evidence").

11.1.10 Aspiration hazard

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.11 Further toxicological information

Assessment:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Hydrolysis product / impurity: Ethanol (64-17-5) is readily absorbed at all exposure routes. Ethanol may cause irritation of eyes and mucosa, trigger dysfunction of the central nervous system and cause nausea as well as dizziness. Chronic exposure to high amounts of ethanol may cause damage to liver and central nervous system.

Section 12: Ecological Information

12.1 Toxicity:

Assessment:

Up to the maximal solubility in the test medium the substance and its hydrolysis products do not show any acute effects on aquatic organisms that are relevant for classification and labelling. According to current knowledge adverse effects on water purification plants are not expected.

Product Details:

Result/effect	Species/test system	Source
LC50: >100mg/l (nominal)	Semistatic, rainbow trout (Oncorhynchus mykiss) (96h)	Test report OECD 203
EC50: effect level > maximum achievable concentration	Daphnia (48 h)	Expert judgement
IC50 (growth rate): effect level > maximum achievable concentration	Pseudokirchneriella subcapitata (72 h)	Expert judgement
EC50: > 100 mg/l	sludge (3 h)	Test report OECD 211
NOEC (reproduction): 32 mg/l (measured) effect level > maximum achievable concentration	semistatic Daphnia magna (21 d)	Test report OECD 211

12.2 Persistence and degradability:

Assessment:

Contact with water liberates ethanol and silanol- and/or siloxanol-compounds. The hydrolysis product (Ethanol) is readily biologically degradable.

Product Details:

Biodegradation:

Result	Test system	Source
13 % / 28 d Not readily biodegradable. Rapid biological degradation of the organic hydrolysis product.	biological oxygen demand (BOD)	Test report OECD 310

Hydrolysis:

Result	Test system	Source
Half-life: 22 h	pH 7; 20 - 25 °C	Calculated value

This product contains no relevant substances considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

Bioaccumulation: Not expected to occur.

Mobility in soil: No data available.

Other Adverse Effects: No ecotoxicological studies are available.

Section 13: Disposal Considerations

Disposal Methods: Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

Packaging Disposal:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

Section 14: Transportation

US DOT & Canada TDG Surface:

Valuation: Not regulated for transport

Other information: This material has been tested and does not sustain combustion. No DOT flammable liquid class 3 diamond label or bulk combustible liquid placards required.

Transport by sea IMDG-Code:

Valuation: Not regulated for transport

Other information: Not regulated in Class 3- IMDG 2.3.1.3 as the substance does not sustain combustion.

Air transport ICAO-TI/ATA-DGR:

Valuation: Not regulated for transport

Other information: Not regulated in Class 3- IATA 3.3.1.3/ICAO 3.1.3 as substance does not sustain combustion. Due to safety reason, no air transport in totes (IBC) or vented packaging.

Section 15: Regulatory Information

This product does not contain any:

- Chemicals regulated under:
 - TSCA 12(b)
 - CERCLA
 - SARA 311
 - SARA 312
 - SARA 313
- Hazardous air pollutants.

- Chemicals known to the state of California to cause cancer or reproductive effects.
- Chemicals included in the California Drinking Water Act

Massachusetts Substance List

64-17-5..... Ethanol

New Jersey Right-to-Know Hazardous Substance List:

64-17-5.....Ethanol

Pennsylvania Right-to-Know Hazardous Substance List:

64-17-5..... Ethanol

Section 16: Other Information

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This SDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Additional information on the product is available at: www.tccmaterials.com

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