BLUESTONE PRODUCTS
A TCC Materials Company
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Mendota Heights, MN 55120-1221

Emergency Telephone Number:
651-688-9116
Information Telephone Number
651-688-9116

Revision Date
June 2021

Section 1: Product Identification

Product Type: Concrete Sealer

Product Name:
Tenon™ Paver Guardian WB

Section 2: Hazard Identification

Hazard Risk Classification
This product has been evaluated according to GHS and 29CFR1910.1200, Appendix A, and classified as:
Skin irritant, hazard category 2

The most immediate and likely hazard is skin irritation.

Label Elements:
Hazard Pictogram:

Signal Word: Warning.
Hazard Statements:
Causes skin irritation.

Applicable Precautionary Statements:
Precautionary Statements:
General
Read label before use. Keep out of reach of children. If medical advice is needed, have product container at hand.
Prevention
Wash skin thoroughly after handling.
Wear protective gloves.
Response
IF ON SKIN: Wash with plenty of water/ soap. Take off contaminated clothing and wash before reuse. If skin irritation occurs; Get medical advice / attention.

Other hazards
None known. No hazards other than skin irritation are likely from normal use of this product.

Section 3: Hazardous Ingredients/Composition

Chemical nature
Aqueous preparation

Ingredient	Typical Percentage*	CAS #
Trialkoxysilane	5-50%	Proprietary

*Specific chemical identities and concentrations withheld as trade secret. They are available upon request to health professionals, employees and their designated representatives in accord with 29CFR1910.1200(i).

Section 4: First Aid Measures

General advice:
Remove contaminated or saturated clothing immediately and dispose of safely.

Eye contact:
Hold eyelids apart and flush with plenty of water. At least 15 minutes of flushing is recommended for any chemical contact. Check for and remove any contact lenses. If an irritation persists, get medical attention.

Skin Contact:
Remove contaminated clothing and shoes. Wash off with soap and plenty of water. Wash clothing and clean contaminated shoes before reuse.

Inhalation:
If aerosol or mists are inhaled, take affected persons out into the fresh air. May cause irritation of mucus lining (nose, throat, eyes), cough, sneezing and flow of tears. In case of persistent discomfort, obtain medical attention.

Ingestion:
Get medical attention (check with the Poison Control Center or a doctor. If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.
Never administer anything by mouth to an individual who is rapidly losing consciousness, unconscious or convulsing.

Most important symptoms and effects, both acute and delayed
Symptoms
Moderately irritating to the skin. Can be slightly irritating to eyes.
Hydrolysed to ethanol – if a quantity is swallowed, toxic effects of ethanol ingestion are possible.

Indication of any immediate medical attention and special treatment needed
If required, therapy for irritative effect.
If substance has been swallowed: early endoscopy is recommended to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, aspirate leftover substance.

Section 5: Fire Fighting Measures

Fire extinguishing media:
Suitable extinguishing media: Water spray, foam, carbon dioxide (CO2), dry powder
Unsuitable extinguishing media: High volume water jet.

Special hazards arising from the substance or mixture: none

Hazardous combustion products: carbon monoxide, carbon dioxide, silicon oxides.

Special protective actions for fire-fighters: Prevent runoff from entering sewers, streams, water sources.

Special protective equipment for fire-fighters: Firefighters should wear personal protective equipment, including self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment suitable for routine use (see section 8).

Environmental precautions
Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Methods and material for containment and cleaning up
Stop leak if you can do so safely. Contain spill. Dike drains to prevent entry into sewers, waterways. Soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Promptly clean surface with aqueous soap solution.

Section 7: Handling and Storage

Precautions for safe handling
Provide good ventilation.

Conditions for safe storage, including any incompatibilities
Keep container closed. Keep from freezing and from exposure to temperatures above 35°C (95°F).
May generate ethanol on contact with water or moisture.

Advice on protection against fire and explosion
Normal measures for preventive fire protection.
Keep away from sources of ignition - No smoking.
Vapors may form explosive mixtures with air.
Wash hands after use.
Do not eat, drink, or use tobacco products when handling any chemical products.

Storage stability
12 months

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits:

	OSHA PEL	OSHA 1989 PEL[1]	ACGIH TLV	NIOSH REL
Trialkoxysilane	None established			
Ethanol[2]	1000 ppm	1000 ppm	1000 ppm	1000 ppm

[1]For states that adopted the 1989 PEL revisions (Minnesota, Oregon, Washington, California
[2]Ethanol is not an ingredient but may be produced from hydrolysis with water or moisture, particularly after long term storage.

Engineering Controls:
Sufficient to maintain vapors below recommended limits. General ventilation is usually adequate for typical product use.

Personal protective measures and equipment

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Remove potentially contaminated clothing and wash before reusing.

Eye/face protection: Safety glasses with side shields are recommended to ensure against any eye contact.

Hand protection: Chemical-resistant, impervious gloves should be worn when handling chemical products, particularly for prolonged contact. Check gloves during use to ensure that the gloves are still retaining their protective properties.

Glove selection guidelines:

Glove material	Material thickness	Break through time
Butyl-rubber	0.5 mm	≥ 480 min
Fluorinated rubber (Viton)	0.4 mm	≥ 480 min
Nitrile rubber/Nitrile latex (NBR)	0.11 mm	≥ 480 min
Polychloroprene (PCP), neoprene	0.65 mm	≥ 480 min

This information is based on tests done by the manufacturer of the main ingredient, references from the literature and information from glove manufacturers, or derived by analogy with similar materials. Suitability for specific workplaces should be clarified with protective glove manufacturers. Actual effective use time of a chemical protective glove is likely to be shorter than the break through time due to the many influencing factors (e.g. temperature, mechanical strain on the glove material). The above mentioned hand protection recommendations are based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.

Skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the tasks performed and risks involved.

Respiratory protection: None usually required. If concentrations cannot be maintained below exposure limits with ventilation alone, use cartridge respirator with organic vapor cartridges. Choose a respirator with an appropriate assigned protection factor for the expected concentrations.

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	liquid
Color	white (dries to clear)
Form	liquid
Odor	faint inherent odor
Odor Threshold	not determined
pH	6 - 9 (25 °C)
Melting point/range	not determined
Boiling point/range	ca. 212°F (100 °C)
Flash point	>100 °C (212°F)

	Method: DIN EN ISO 2719 (Pensky-Martens, Closed Cup)
Evaporation rate	not determined
Flammability (solid, gas)	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapor pressure	not determined
Relative density	not determined
Density	ca. 0.96 g/cm3 (24°F)
Water solubility	miscible
Partition coefficient:	
n-octanol/water	not determined
Autoignition temperature	not determined
Thermal decomposition	not determined
Viscosity, dynamic	not determined
Viscosity, kinematic	no data available
Other information	no data available

Section 10: Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: None known.
Incompatible materials: None known.

Hazardous polymerization: Will not occur.

Hazardous decomposition products: Ethanol in case of hydrolysis

Section 11: Toxicological Information

Toxicity testing has not been done on product as a whole.
No ingredient is considered respiratory or skin sensitizers.
No ingredient is listed as a carcinogen by OSHA, National Toxicology Report on Carcinogens, or the International Agency for Research on Cancer (IARC).

Toxicological information on components
Trialkoxysilane

Acute oral toxicity:
LD_{50} Rat: > 5110 mg/kg
(Method: OECD Test Guideline 401)
Acute inhalation toxicity:
LCI_0 Rat: 22 ppm / 4 h (saturated vapor concentration)
(Method: OECD Test Guideline 403)
Assessment: The substance or mixture has no acute inhalation toxicity maximum concentration in the test: no animals died.

Acute dermal toxicity:
LD_{50} Rabbit: 67.30 mg/kg
(Method: OECD Test Guideline 402)

Skin irritation:
Rabbit: Skin irritation
(Method: OECD Test Guideline 404)

Eye irritation
Rabbit: No eye irritation developed
(Method: OECD Test Guideline 405)

Sensitization
Maximization test: Guinea pig: Does not cause skin sensitization. Test substance: Structurally similar substance
(Method: OECD Test Guideline 406)
Repeated dose toxicity,
Oral Rat / 28-day,
NOAEL: 300 mg/kg
(Method: OECD Test Guideline 422)
Assessment of STOT Single exposure:
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Assessment of STOT Repeat Exposure:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Risk of aspiration toxicity:
no evidence of aspiration toxicity
Genotoxicity in vitro:
Ames test Salmonella typhimurium: Negative
(Method: OECD Test Guideline 471)
Chromosomal aberration: Chinese hamster (CHO K1-cells): Negative
(Method: OECD Test Guideline 473)

Genetic mutation in mammal cells TK +/- mouse lymphoma cell (L5178Y): Negative
(Method: OECD Test Guideline 476)
Carcinogenicity:
No data available.
Toxicity to reproduction:
Screening for reproductive/developmental toxicity: Oral Rat
Number of exposures: Daily

NOAEL (No Observed Adverse Effect Level) of parents: 300 mg/kg
NOAEL F1: 300 mg/kg (Method: OECD Test Guideline 422)

Section 12: Ecological Information

Toxicity

No ecotoxicological studies are available for the product as a whole.

Trialkoxysilane

Fish [Oncorhynchus mykiss]: 96 h LC_{50} > 0.055 mg/L (OECD TG 203; flow-through; measured; tested at the water solubility limit)

Invertebrate [Daphnia magna]: 48 h EC_{50} > 0.049 mg/L (OECD TG 202; flow-through; measured; tested at the water solubility limit)

Algae [Pseudokirchneriella subcapitata]: 72-hour E_vC_{50}, E_rC_{50}, E_bC_{50}, > 0.13 mg/L (OECD TG 201; nominal; tested at the water solubility limit)

Algae [Pseudokirchneriella subcapitata]: NOEC = 0.13 mg/L (nominal; tested at the water solubility limit)

Persistence and degradability

Likely not readily biodegradable.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Section 13: Disposal Considerations

As provided, not a RCRA-regulated waste

Do not sewer or dump on the ground.

Dispose of in accordance with federal, state, and local regulations.
Dried material may usually be disposed of as industrial solid water.

Since empty containers retain product residue, follow SDS and label warnings even after container is emptied. Do not reuse empty containers; dispose of in accordance with local regulations.

Section 14: Transportation

Not dangerous according to transport regulations.

UN number:	Not applicable.
UN proper shipping name:	Not applicable.
Transport hazard class:	Not applicable.
Environmental hazards (Marine pollutant):	Not applicable.

Section 15: Regulatory Information

US Toxic Substance Control ACT (TSCA):
All ingredients of this product are listed, or are excluded from listing, on the US Toxic Substances Control Act (TSCA) chemical substance inventory.

This product does not contain any extremely hazardous substances regulated under SARA 302, 303 or CERCLA

Chemicals on California's List of Chemicals known to the state of California to cause cancer or reproductive effects (Proposition 65): none

Chemicals on the New Jersey Right to Know Hazardous Substance List: trialkoxysilane

Hazardous air pollutants: none

SARA 311/312 Hazard Categories
- Acute health hazard Yes
- Chronic Health Hazard No
- Fire hazard No
- Sudden release of pressure hazard No
- Reactive Hazard No

Section 16: Other Information

HMIS® Rating: Health: 1 Fire: 1 Reactivity: 0
HMIS® is a registered trademark of the National Paint and Coatings Association
NFPA 704 Rating: Health: 1 Fire: 1 Instability: 0

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

Date and Revision: 15 June 2021, Revision 1.1

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Before using any product, read its label and safety data sheet.