

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

**Initial Preparation Date:** 03.31.2020

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### Total Shield® Ceramic Seal

#### SECTION 1: Identification

##### Product Identifier

**Product Name:** Total Shield® Ceramic Seal

**Product code:** QW-0504

##### Recommended Use of the Product and Restriction on Use

**Relevant Identified Uses:** Commercial Vehicle Wash -  
Sealant/Protectant/Rinse Aid

**Uses Advised Against:** Not determined or not applicable.

**Reasons Why Uses Advised Against:** Not determined or not applicable.

##### Manufacturer or Supplier Details

###### Manufacturer:

###### United States

Quest Car Care Products

3333 Production Ct.

Zeeland, Michigan 49464

616-772-5100

www.questcarcare.com

##### Emergency Telephone Number:

###### United States

CHEMTREC

1-800-424-9300 (24 hrs)

1-800-262-8200 (24 hrs)

1-703-527-3887 (24 hrs (international))

#### SECTION 2: Hazard(s) Identification

##### GHS Classification:

Skin irritation, category 2

Serious eye damage, category 1

Flammable liquids, category 4

Reproductive toxicity, category 2

Specific target organ toxicity - repeated exposure, category 2

Acute toxicity (oral), category 4

Acute toxicity (inhalation), category 4

##### Label elements

###### Hazard Pictograms:



**Signal Word:** Danger

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### Hazard statements:

- H227 Combustible liquid
- H315 Causes skin irritation
- H318 Causes serious eye damage
- H361 Suspected of damaging fertility or the unborn child (eyes, central nervous system) if swallowed or inhaled.
- H373 May cause damage to organs (eyes, central nervous system) through prolonged or repeated exposure if swallowed or inhaled.
- H302 Harmful if swallowed
- H332 Harmful if inhaled

### Precautionary Statements:

- P264 Wash hands/skin thoroughly after contact with or handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P270 Do not eat, drink or smoke when using this product
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P271 Use only outdoors or in a well-ventilated area
- P302+P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
- P321 Specific treatment (see first aid procedures on the product label in section 4 of this SDS)
- P332+P313 If skin irritation occurs: Get medical advice/attention
- P362 Take off contaminated clothing and wash it before reuse
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 Immediately call a POISON CENTER/911/PHYSICIAN IF: swallowed, eye contact, skin burns/rash or breathing difficulties.
- P370+P378 In case of fire: Use water spray or foam to extinguish [water jet not recommended].
- P308+P313 IF exposed or concerned: Get medical advice/attention
- P314 Get medical advice/attention if you feel unwell
- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P330 Rinse mouth
- P312 Call a POISON CENTER/911/PHYSICIAN if you feel unwell.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P403+P235 Store in a well-ventilated place. Keep cool
- P405 Store locked up
- P501 Dispose of contents/container in accordance with local, state and federal regulations.

**Hazards Not Otherwise Classified:** None

## SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 111-76-2	2-Butoxyethanol	10-20
CAS Number: Proprietary	Aminosilane	5-10

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CAS Number: Proprietary	Polymer	5-10
CAS Number: Proprietary	Emulsifier	5-10
CAS Number: Proprietary	Solvent	1-5
CAS Number: 64-19-7	Acetic Acid	1-5
CAS Number: 67-63-0	Propan-2-ol	0.1-1
CAS Number: 556-67-2	Octamethylcyclotetrasiloxane	0.1-1
CAS Number: 67-56-1	Methanol	0.1-1
CAS Number: 541-02-6	Decamethylcyclopentasiloxane	0.1496-0.8 872
CAS Number: 540-97-6	Decamethylcyclohexasiloxane	0.08-0.8

**Additional Information:** None

## SECTION 4: First Aid Measures

### Description of First Aid Measures

#### General Notes:

Show this Safety Data Sheet to the doctor in attendance.

Show this Safety Data Sheet to the doctor in attendance. Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

#### After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

#### After Skin Contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

#### After Eye Contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention,

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preferably from an ophthalmologist.

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Rinse eyes with plenty of water for several minutes. Remove contact lenses, if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

#### After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

#### Most Important Symptoms and Effects, Both Acute and Delayed

##### Acute Symptoms and Effects:

Skin contact may result in redness, pain, burning and inflammation.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Product is combustible. Exposure to sources of ignition may cause physical injury.

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Acute inhalation exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

##### Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time).

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

May cause damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Symptoms of exposure may be delayed.

#### Immediate Medical Attention and Special Treatment

##### Specific Treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Skin/eye burns require immediate treatment.

##### Notes for the Doctor:

Treat symptomatically.

### SECTION 5: Firefighting Measures

#### Extinguishing Media

##### Suitable Extinguishing Media:

Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

##### Unsuitable Extinguishing Media:

Do not use water jet.

#### Specific Hazards During Fire-Fighting:

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Combustible liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation.

Thermal decomposition may produce irritating/toxic fumes/gases.

#### Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

#### Special precautions:

Evacuate non-essential personnel. Ventilate closed spaces before entering. Consider initial evacuation for 300 meters in all directions. If tank/rail car is involved in the fire, ISOLATE for 800 meters in all directions. Fight fire from a maximum distance. Move containers from fire area if you can do it without risk. Use water spray/fog for cooling fire exposed containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Stand by, at a safe distance, with extinguisher ready for possible re-ignition. A vapor-suppressing foam may be used to reduce vapors. Avoid unnecessary run-off of extinguishing media which may cause pollution. Do not handle damaged containers unless specialized to do so.

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts.

Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers.

Avoid unnecessary run-off of extinguishing media which may cause pollution.

### SECTION 6: Accidental Release Measures

#### Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. All equipment used when handling the product must be grounded. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

#### Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

#### Methods and Material for Containment and Cleaning Up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

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Harmful if swallowed. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Harmful if inhaled. Put on appropriate personal protective equipment, including a self-contained breathing apparatus (see Section 8) before entering area of spill or leak. Avoid breathing dust, mist, fumes, vapors or spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

### Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

## SECTION 7: Handling and Storage

### Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges. Handle containers with caution. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

### Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

## SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

### Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Octamethylcyclotetrasiloxane	556-67-2	IDLH: 10 ppm
	Propan-2-ol	67-63-0	IDLH: 2000 ppm
	Propan-2-ol	67-63-0	15-Minute STEL: 500 ppm (1,225 mg/m <sup>3</sup> )
	Propan-2-ol	67-63-0	REL-TWA: 400 ppm (980 mg/m <sup>3</sup> - up to 10 hrs.)
	2-Butoxyethanol	111-76-2	IDLH: 700 ppm

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	2-Butoxyethanol	111-76-2	REL-TWA: 24 mg/m <sup>3</sup> (5 ppm [up to 10 hr])
	Solvent	Proprietary	REL-TWA: 350 mg/m <sup>3</sup> (up to 10 hr [petroleum distillates, naphtha])
	Acetic Acid	64-19-7	REL: 10 ppm
	Acetic Acid	64-19-7	REL: 25 mg/m <sup>3</sup>
	Acetic Acid	64-19-7	STEL: 15 ppm
	Acetic Acid	64-19-7	STEL: 37 mg/m <sup>3</sup>
	Acetic Acid	64-19-7	IDLH: 50 ppm
	Methanol	67-56-1	REL-TWA: 260 mg/m <sup>3</sup> (200 ppm [for up to a 10-hour workday during a 40-hour workweek])
	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	Methanol	67-56-1	IDLH: 6000 ppm
	Solvent	Proprietary	Ceiling Limit: 1800 mg/m <sup>3</sup> ([15 min] petroleum distillates, naphtha)
WEEL	Octamethylcyclotetrasiloxane	556-67-2	8-Hour TWA: 10 ppm
	Decamethylcyclopentasiloxane	541-02-6	8-Hour TWA: 10 ppm
ACGIH	Propan-2-ol	67-63-0	15-Minute STEL: 400 ppm
	Propan-2-ol	67-63-0	8-Hour TWA: 200 ppm
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 20 ppm
	Acetic Acid	64-19-7	8-Hour TWA: 10 ppm
	Acetic Acid	64-19-7	15-Minute STEL: 15 ppm
	Methanol	67-56-1	8-Hour TWA: 200 ppm
	Methanol	67-56-1	15-Minute STEL: 250 ppm
OSHA	Propan-2-ol	67-63-0	8-Hour TWA-PEL: 980 mg/m <sup>3</sup> (400 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m <sup>3</sup> (50 ppm [Table Z-1])
	Acetic Acid	64-19-7	TWA: 10 ppm
	Acetic Acid	64-19-7	TWA: 25 mg/m <sup>3</sup>
	Methanol	67-56-1	8-Hour TWA-PEL: 260 mg/m <sup>3</sup> (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	2-Butoxyethanol	111-76-2	8-Hour TWA: 120 mg/m <sup>3</sup> (25 ppm [Table Z-1-A])
	Solvent	Proprietary	8-Hour TWA-PEL: 2000 mg/m <sup>3</sup> (500 ppm [aliphatic hydrocarbons])
United States(California)	Propan-2-ol	67-63-0	8-Hour TWA-PEL: 980 mg/m <sup>3</sup> (400 ppm - Cal/OSHA)
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m <sup>3</sup> (20 ppm)
	Methanol	67-56-1	15-Minute STEL: 325 mg/m <sup>3</sup> (250 ppm)
	Methanol	67-56-1	PEL Ceiling: 1000 ppm
	Methanol	67-56-1	8-Hour TWA: 260 mg/m <sup>3</sup> (200 ppm)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	2-Butoxyethanol	111-76-2	REL: 4700 ug/m <sup>3</sup> (Acute inhalation)
	2-Butoxyethanol	111-76-2	REL: 164 ug/m <sup>3</sup> (8-hour Inhalation)
	2-Butoxyethanol	111-76-2	REL: 82 ug/m <sup>3</sup> (Chronic inhalation)
	Propan-2-ol	67-63-0	REL: 3200 ug/m <sup>3</sup> (Acute Inhalation)
	Propan-2-ol	67-63-0	REL: 7000 ug/m <sup>3</sup> (Chronic Inhalation)
	Solvent	Proprietary	8-Hour TWA-PEL: 1600 mg/m <sup>3</sup> (400 ppm [aliphatic hydrocarbons])

### Biological Limit Values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	2-Butoxyethanol	111-76-2	Butoxyacetic acid (with hydrolysis)	Creatinine in Urine	End of shift	200 mg/g
	Methanol	67-56-1	Methanol	Urine	End of Shift	15 mg/L
	Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work week	40 mg/L
	Methanol	67-56-1	Methanol	Urine	End of shift.	15 mg/L

### Information on Monitoring Procedures:

Not determined or not applicable.

### Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

### Personal Protection Equipment

#### Eye and Face Protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection.

Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

#### Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).



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Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

### Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

### General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

## SECTION 9: Physical and Chemical Properties

### Information on Basic Physical and Chemical Properties

Appearance	Yellow liquid
Odor	Etherlike - Acrid - Tropical
Odor threshold	Not determined or not available.
pH	3.5-5.5
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	>60 c - <90 c
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	0.95-0.97
Solubilities	Water
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

## SECTION 10: Stability and Reactivity

Reactivity:

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Not reactive under recommended handling and storage conditions.

### Chemical Stability:

Stable under recommended handling and storage conditions.

### Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

### Conditions to Avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources, static electricity and incompatible materials. Vapor accumulation in low or confined areas.

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Avoid confined spaces, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

### Incompatible Materials:

None known.

### Hazardous Decomposition Products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological Information

### Acute Toxicity

#### Assessment:

Harmful if swallowed.

Harmful if inhaled.

**Product Data:** No data available.

#### Substance Data:

Name	Route	Result
Octamethylcyclotetrasiloxane	oral	LD50 Rat: > 4800 mg/kg
	dermal	LD50 Rat: > 2375 mg/kg
	inhalation	LC50 Rat: 36 mg/L (4 hr (aerosol))
Propan-2-ol	oral	LD50 Rat: 5840 mg/kg
	dermal	LD50 Rabbit: 12,800 mg/kg
	inhalation	LC50 Rat: 72.6 mg/L (4 hr - Vapor)
2-Butoxyethanol	dermal	LD50 Rabbit: 220 mg/kg
	inhalation	LC50 Rat: 450 ppmV (4 hr - Vapor)
	Oral ATE	LD50 Rat: 1200 mg/kg (Annex VI to the CLP)
	oral	LD50 Rat: 470 mg/kg
Solvent	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >5.28 mg/L (4h Vapor)
Acetic Acid	oral	LD50 rat: 3310 mg/kg
	inhalation	LC50 mouse: 5620 ppmV (1H)

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Name	Route	Result
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr)
	oral	LD50 Rat: 5628 mg/kg
	dermal	LD50 Rabbit: 15,800 mg/kg
	inhalation	LC50 Rat: 64,000 ppmV (4 hr)
Emulsifier	oral	LD50 Rat: 750 mg/L
Decamethylcyclopentasiloxane	oral	LD50 Rat: >5000 mg/kg
	inhalation	LC50 Rat: 8.67 mg/L (4 hours)
	dermal	LD50 Rabbit: >2000 mg/kg
Decamethylcyclohexasiloxane	oral	LD50 Rat: >50000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg

### Skin Corrosion/Irritation

**Assessment:**

Causes skin irritation.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
2-Butoxyethanol	Causes skin irritation.
Acetic Acid	Causes severe skin burns.
Emulsifier	Causes skin irritation.
Aminosilane	Causes skin irritation.

### Serious Eye Damage/Irritation

**Assessment:**

Causes serious eye damage.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Propan-2-ol	Causes serious eye irritation.
2-Butoxyethanol	Causes serious eye irritation.
Acetic Acid	Causes serious eye damage.
Emulsifier	Causes serious eye damage.
Aminosilane	Causes serious eye irritation.

### Respiratory or Skin Sensitization

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:**

No data available.

**Substance Data:** No data available.

### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

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**Product Data:** No data available.

**Substance Data:** No data available.

### International Agency for Research on Cancer (IARC):

Name	Classification
Octamethylcyclotetrasiloxane	Not Applicable
Propan-2-ol	Group 3
2-Butoxyethanol	Group 3
Solvent	Not Applicable
Acetic Acid	Not Applicable
Methanol	Not Applicable
Emulsifier	Not Applicable
Decamethylcyclopentasiloxane	Not Applicable
Aminosilane	Not Applicable
Decamethylcyclohexasiloxane	Not Applicable
Polymer	Not Applicable

### National Toxicology Program (NTP):

Name	Classification
Octamethylcyclotetrasiloxane	Not Applicable
Propan-2-ol	Not Applicable
2-Butoxyethanol	Not Applicable
Solvent	Not Applicable
Acetic Acid	Not Applicable
Methanol	Not Applicable
Emulsifier	Not Applicable
Decamethylcyclopentasiloxane	Not Applicable
Aminosilane	Not Applicable
Decamethylcyclohexasiloxane	Not Applicable
Polymer	Not Applicable

**OSHA Carcinogens:** Not applicable

### Germ Cell Mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:**

No data available.

**Substance Data:** No data available.

### Reproductive Toxicity

**Assessment:**

Suspected of damaging fertility or the unborn child.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Octamethylcyclotetrasiloxane	Suspected of damaging fertility.

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### Specific Target Organ Toxicity (Single Exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Propan-2-ol	May cause drowsiness or dizziness.
Methanol	Causes damage to Optic nerve (nervus opticus), central nervous system.

### Specific Target Organ Toxicity (Repeated Exposure)

**Assessment:**

May cause damage to organs through prolonged or repeated exposure.

**Product Data:**

No data available.

**Substance Data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:**

No data available.

**Substance Data:**

Name	Result
Solvent	May be fatal if swallowed and enters airways.

### Information on Likely Routes of Exposure:

No data available.

### Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

**Other Information:**

No data available.

## SECTION 12: Ecological Information

### Acute (Short-Term) Toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:** No data available.

**Substance Data:**

Name	Result
2-Butoxyethanol	Aquatic Invertebrates EC50 Daphnia magna: 1,550 mg/L (48 hr)
	Fish LC50 Oncorhynchus mykiss: 1,474 mg/L (96 hr)
Solvent	Fish LC50 Oncorhynchus mykiss: 2.9 mg/L (96 H)
	Aquatic Invertebrates EC50 Daphnia Magna: 1.9 mg/L (24 H)
	Aquatic Plants EC50 Selenastrum capricornutum (Algae): 6.7 mg/L (72 H)

### Chronic (Long-Term) Toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product Data:** No data available.

**Substance Data:**

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Name	Result
Octamethylcyclotetrasiloxane	Fish NOEC Oncorhynchus mykiss: $\geq 0.0044$ mg/L (93 d)
	Aquatic Invertebrates NOEC Daphnia magna: $\geq 0.015$ mg/L (21 d)
	Aquatic Plants NOEC Pseudokirchneriella subcapitata: $< 0.022$ mg/L (96 hr)
2-Butoxyethanol	Fish NOEC Danio rerio: $> 100$ mg/L (21 d)
	Aquatic Invertebrates NOEC Daphnia magna: 100 mg/L (21 d)
Solvent	Aquatic Invertebrates EC50 Daphnia magna: 0.81 mg/L (21 days)
Decamethylcyclohexasiloxane	Fish NOEC Onchorhynchus mykiss: $>0.014$ mg/L (90 days)

### Persistence and Degradability

**Product Data:** No data available.

**Substance Data:**

Name	Result
Octamethylcyclotetrasiloxane	Under test conditions, little biodegradation observed (3.7% biodegradation after 29 days).
Propan-2-ol	Readily biodegradable in water.
2-Butoxyethanol	Readily biodegradable (90.4% degradation after 28 days).
Acetic Acid	Readily biodegradable in water.
Methanol	Readily biodegradable (97% degradation after 20 days).
Solvent	Readily to inherently biodegradable.
Decamethylcyclopentasiloxane	Not readily biodegradable
Decamethylcyclohexasiloxane	Not readily biodegradable (4.5% degradation in 28 days).

### Bioaccumulative Potential

**Product Data:** No data available.

**Substance Data:**

Name	Result
Octamethylcyclotetrasiloxane	BCF: 14900 l/kg (lipid normalised, kinetic)
Propan-2-ol	Not expected to bioaccumulate (log Kow: 0.05).
2-Butoxyethanol	Not expected to bioaccumulate (log Kow = 0.83).
Methanol	Methanol does not significantly bioaccumulate in fish. Experimental BCFs of $< 10$ in fish species.
Decamethylcyclohexasiloxane	BCF: 2860 (aquatic species)

### Mobility in Soil

**Product Data:** No data available.

**Substance Data:**

Name	Result
Octamethylcyclotetrasiloxane	Hardly mobile (log Koc: 4.22).
Methanol	Highly mobile (Koc: 0.13 - 0.61 dimensionless).
Decamethylcyclohexasiloxane	Koc at 20°C: 790000

### Results of PBT and vPvB assessment

**Product Data:**

**PBT assessment:** This product does not contain any substances that are assessed to be a PBT.

**vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB.

**Substance Data:**

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### PBT assessment:

Octamethylcyclotetrasiloxane	The substance is PBT.
Propan-2-ol	This substance is not PBT.
2-Butoxyethanol	This substance is not PBT.
Solvent	This substance is a UVCB and does not contain constituents included in the SVHC candidate list as PBT at concentrations above 0.1%.
Methanol	This substance is not PBT.
Decamethylcyclopentasiloxane	This substance is not PBT
Decamethylcyclohexasiloxane	This substance is not PBT

### vPvB assessment:

Octamethylcyclotetrasiloxane	The substance is vPvB.
Propan-2-ol	This substance is not vPvB.
2-Butoxyethanol	This substance is not vPvB.
Solvent	This substance is a UVCB and does not contain constituents included in the SVHC candidate list as vPvB at concentrations above 0.1%.
Methanol	This substance is not vPvB.
Decamethylcyclopentasiloxane	This substance is not vPvB
Decamethylcyclohexasiloxane	This substance is not vPvB

**Other Adverse Effects:** No data available.

## SECTION 13: Disposal Considerations

### Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

### Contaminated packages:

Not determined or not applicable.

## SECTION 14: Transport Information

### United States Transportation of Dangerous Goods (49 CFR DOT)

<b>UN Number</b>	Not regulated
<b>UN Proper Shipping Name</b>	Not regulated
<b>UN Transport Hazard Class(es)</b>	None
<b>Packing Group</b>	None
<b>Environmental Hazards</b>	None
<b>Special Precautions for User</b>	None

### International Maritime Dangerous Goods (IMDG)

<b>UN Number</b>	Not regulated
<b>UN Proper Shipping Name</b>	Not regulated
<b>UN Transport Hazard Class(es)</b>	None
<b>Packing Group</b>	None

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<b>Environmental Hazards</b>	None
<b>Special Precautions for User</b>	None

**International Air Transport Association Dangerous Goods Regulations (IATA-DGR)**

<b>UN Number</b>	Not regulated
<b>UN Proper Shipping Name</b>	Not regulated
<b>UN Transport Hazard Class(es)</b>	None
<b>Packing Group</b>	None
<b>Environmental Hazards</b>	None
<b>Special Precautions for User</b>	None

**SECTION 15: Regulatory Information**

**United States Regulations**

**Inventory Listing (TSCA):** All ingredients are listed-active or exempt.

**Significant New Use Rule (TSCA Section 5):** None of the ingredients are listed.

**Export Notification under TSCA Section 12(b):**

556-67-2	Octamethylcyclotetrasiloxane	Listed
67-63-0	Propan-2-ol	Not Listed
111-76-2	2-Butoxyethanol	Not Listed
Proprietary	Solvent	Not Listed
64-19-7	Acetic Acid	Not Listed
67-56-1	Methanol	Not Listed
541-02-6	Decamethylcyclopentasiloxane	Not Listed
Proprietary	Aminosilane	Not Listed
540-97-6	Decamethylcyclohexasiloxane	Not Listed
Proprietary	Polymer	Not Listed

**SARA Section 302 Extremely Hazardous Substances:** None of the ingredients are listed.

**SARA Section 313 Toxic Chemicals:**

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
67-56-1	Methanol	Listed

**CERCLA:**

111-76-2	2-Butoxyethanol	Listed	N/A
64-19-7	Acetic Acid	Listed	5000
67-56-1	Methanol	Listed	5000 lbs



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### RCRA:

67-56-1	Methanol	Listed	U154
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**Section 112(r) of the Clean Air Act (CAA):** None of the ingredients are listed.

### Massachusetts Right to Know:

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
Proprietary	Solvent	Listed
64-19-7	Acetic Acid	Listed
67-56-1	Methanol	Listed

### New Jersey Right to Know:

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
Proprietary	Solvent	Listed
64-19-7	Acetic Acid	Listed
67-56-1	Methanol	Listed

### New York Right to Know:

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
Proprietary	Solvent	Listed
64-19-7	Acetic Acid	Listed
67-56-1	Methanol	Listed

### Pennsylvania Right to Know:

67-63-0	Propan-2-ol	Listed
111-76-2	2-Butoxyethanol	Listed
Proprietary	Solvent	Listed
64-19-7	Acetic Acid	Listed
67-56-1	Methanol	Listed

### California Proposition 65:

**⚠️WARNING:** This product can expose you to 1,4-dioxane; which is known to the State of California to cause cancer; and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**⚠️WARNING:** This product can expose you to Ethylene oxide; which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other Information

**Abbreviations and Acronyms:** None

### Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

**NFPA:** 0-0-0

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**End of Safety Data Sheet**