

SpecSilane 20 WB

Version 1

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SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	SpecSilane 20 WB
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Penetrating sealer for concrete surfaces
1.3 Company Name:	SpecChem
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	Chemtrec: (800) 424-9300
Date of Last Revision:	October 16, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

US DOT Symbols:

Flammable



EU and GHS Symbols:

Signal Word:

Warning

Components Contributing to Classification:

Triethoxyoctylsilane, Dimethyl siloxane with aminoethylaminopropyl silsesquioxane, hydroxy-term

2.2 Label Elements:

GHS Hazard Classifications:

Skin Irritation – Category 2
 Eye Irritation – Category 2A
 Reproductive toxicity – Category 2

Hazard Statements:

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing spray.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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Response Statements:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Store locked up.

Storage Statements:
Disposal Statements:

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Percent	CAS No.
Triethoxyoctylsilane	>= 10 - < 20	2943-75-1
Dimethyl siloxane with aminoethylaminopropyl silsesquioxane, hydroxy-term	>= 1 - < 5	68554-54-1
Ethoxylated lauryl alcohol	>= 1 - < 5	9002-92-0
Octamethylcyclotetrasiloxane	>= 0.1 - < 1	556-67-2
Methanol	>= 0.1 - < 1	67-56-1
Hexadecyltrimethyl ammonium chloride	>= 0.1 - < 1	112-02-7
Water	30 – 90	7732-18-5
Tetradodium EDTA	<.1	64-02-8
Ethyleneediaminetriacetic acid, trisodium salt	<.1	19019-43-3

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES
4.1 Description of First Aid Measures:

General Advice: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

Inhalation : If inhaled, remove to fresh air. Get medical attention if symptoms occur.

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Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Ingestion : If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child.

Protection of first-aiders:

First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically and supportively.

SECTION 5 – FIRE FIGHTING MEASURES

Fire Extinguishing Materials:

Suitable extinguishing media: Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO₂).

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides, Silicon oxides, Formaldehyde, Nitrogen oxides (NO_x)

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental Precautions:

Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.

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Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: Use only with adequate ventilation.

Advice on safe handling: Do not get on skin or clothing. Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. Keep away from water. Protect from moisture. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage: Keep in properly labeled containers. Store in accordance with the particular national regulations.

Materials to avoid: Do not store with the following product types: Strong oxidizing agents

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

<u>Ingredients</u>	<u>CAS-No.</u>	<u>Value Type (Form of Exposure)</u>	<u>Control parameters/Permissible concentration</u>	<u>Basis</u>
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	DCC OEL
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm	NIOSH REL
			260 mg/m ³	
		ST	250 ppm	NIOSH REL
		TWA	325 mg/m ³	
			200 ppm	OSHA Z-1
			260 mg/m ³	

Hazardous components without workplace control parameters:

<u>Ingredients</u>	<u>CAS-No.</u>
Triethoxyoctylsilane	2943-75-1

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Dimethyl siloxane with aminoethylaminopropyl silsesquioxane, hydroxy-term	68554-54-1
Ethoxylated lauryl alcohol	9002-92-0
Hexadecyltrimethyl ammonium chloride	112-02-7

Occupational exposure limits of decomposition products

<u>Ingredients</u>	<u>CAS-No.</u>	<u>Value Type (Form of Exposure)</u>	<u>Control parameters/Permissible concentration</u>	<u>Basis</u>
Methanol	67-56-1	TWA	200 ppm	ACGIH ACGIH NIOSH REL
		STEL	250 ppm	
		TWA	200 ppm	
		ST	260 mg/m ³	NIOSH REL
TWA	250 ppm			
Ethanol	64-17-5	TWA	325 mg/m ³	OSHA Z-1
		TWA	200 ppm	
		TWA	260 mg/m ³	
		STEL	1,000 ppm	
		TWA	1,900 mg/m ³	OSHA Z-1
		TWA	1,000 ppm	
		STEL	1,900 mg/m ³	
		STEL	1,000 ppm	ACGIH

Biological occupational exposure limits

<u>Ingredients</u>	<u>CAS-No.</u>	<u>Control Parameters</u>	<u>Biological Specimen</u>	<u>Basis</u>	<u>Permissible Concentration</u>	<u>Basis</u>
Methanol	67-56-1	Methanol	Urine	End of shift (as soon as possible after exposure)	15 mg/l	ACGIH BEI

Respiratory Protection:

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air

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Eye Protection:

Hand Protection:

Body Protection:

purifying respirators may not provide adequate protection.
Wear the following personal protective equipment: Safety goggles
Impervious gloves.
Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): white, milky liquid

Odor: slight

Odor Threshold: No data available

pH: No data available

Melting/Freezing Point: No data available

Boiling Point: > 35°C

Flash Point: > 100°C

Evaporation Rate: No data available

Flammability (Solid; Gas): Not applicable

Upper/Lower Flammability or Explosion Limits: No data available

Vapor Pressure (mm Hg @ 20°C (68° F): No data available

Vapor Density: No data available

Relative Density: 1.01

Specific Gravity: No data available

Solubility in Water: Not miscible

Weight per Gallon: No data available

Partition Coefficient (n-octanol/water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: 50 mPa.s

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

This product is not reactive.

10.2 Stability:

Stable under conditions of normal storage and use.

10.3 Possibility of Hazardous Reactions:

Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.

10.4 Conditions to Avoid:

Exposure to moisture

10.5 Incompatible Substances:

Oxidizing agents: water.

10.6 Hazardous Decomposition Products:

Methanol, Ethanol.

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SECTION 11 – TOXICOLOGY INFORMATION

Information on likely routes of exposure

Inhalation
 Skin contact
 Ingestion
 Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity :	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity :	Acute toxicity estimate : > 40 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity :	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Ingredients:

Triethoxyoctylsilane:

Acute oral toxicity :	LD50 (Rat): > 5,110 mg/kg Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity :	LD50 (Rat): 6,730 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on test data

Ethoxylated lauryl alcohol:

Acute oral toxicity :	LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity :	LC50 (Rat): > 1.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: Based on data from similar materials
Acute dermal toxicity :	LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Acute oral toxicity :	LD50 (Rat): > 4,800 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on test data
Acute inhalation toxicity :	LC50 (Rat): 2975 ppm Exposure time: 4 h Test atmosphere: vapor

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Acute dermal toxicity : Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on test data
LD50 (Rabbit): > 2.5 ml/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

Methanol:
Acute oral toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgment
Acute inhalation toxicity : Acute toxicity estimate (Humans): 3 mg/l
Test atmosphere: vapor
Method: Expert judgment
Acute dermal toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgment

Hexadecyltrimethyl ammonium chloride:
Acute oral toxicity : LD50 (Rat): 699 mg/kg
Method: OECD Test Guideline 401
Acute dermal toxicity : LD50 (Rabbit): 528 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Skin corrosion/irritation
Causes skin irritation.

Ingredients:

Triethoxyoctylsilane:
Species: Rabbit
Result: Skin irritation
Remarks: Based on test data

Dimethyl siloxane with aminoethylaminopropyl silsesquioxane, hydroxy-term:
Result: Skin irritation
Remarks: Based on data from similar materials

Ethoxylated lauryl alcohol:
Result: No skin irritation
Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:
Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

Methanol:
Species: Rabbit
Result: No skin irritation

Hexadecyltrimethyl ammonium chloride:
Species: Rabbit

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Result: Corrosive after 1 to 4 hours of exposure
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:

Triethoxyoctylsilane:

Species: Rabbit

Result: No eye irritation

Remarks: Based on test data

Dimethyl siloxane with aminoethylaminopropyl silsesquioxane, hydroxy-term:

Result: Irritation to eyes, reversing within 21 days

Remarks: Based on data from similar materials

Ethoxylated lauryl alcohol:

Result: Irreversible effects on the eye

Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Species: Rabbit

Result: No eye irritation

Remarks: Based on test data

Methanol:

Species: Rabbit

Result: No eye irritation

Hexadecyltrimethyl ammonium chloride:

Species: Rabbit

Result: Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Ingredients:

Ethoxylated lauryl alcohol:

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Assessment: Does not cause skin sensitization.

Test Type: Maximization Test (GPMT)

Species: Guinea pig

Remarks: No known sensitising effect.

Based on test data

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Methanol:

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

Hexadecyltrimethyl ammonium chloride:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Triethoxyoctylsilane:

Genotoxicity in vitro :

Test Type: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative

Remarks: Based on test data

Ethoxylated lauryl alcohol:

Genotoxicity in vitro :

Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Octamethylcyclotetrasiloxane:

Genotoxicity in vitro :

Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on test data

Test Type: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative

Remarks: Based on test data

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on test data

Test Type: In vitro sister chromatid exchange assay in mammalian cells

Result: negative

Remarks: Based on test data

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)

Result: negative

Remarks: Based on test data

Genotoxicity in vivo :

Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)

Test species: Rat

Application Route: inhalation (vapor)

Result: negative

Remarks: Based on test data

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Germ cell mutagenicity- : Assessment	Test Type: Rodent dominant lethal test (germ cell) (in vivo) Test species: Rat Application Route: Ingestion Result: negative Remarks: Based on test data Animal testing did not show any mutagenic effects.
Methanol: Genotoxicity in vitro :	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo :	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Test species: Mouse Application Route: Intraperitoneal injection Result: negative
Hexadecyltrimethyl ammonium chloride:	Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
Carcinogenicity Not classified based on available information.	
Ingredients: Methanol: Species: Mouse Application Route: inhalation (vapor) Exposure time: 18 Months Method: OECD Test Guideline 453 Result: negative	
IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive toxicity Suspected of damaging fertility or the unborn child.	

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Ingredients:

Triethoxyoctylsilane:

Effects on fertility :

Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test

Species: Rat, male and female

Application Route: Ingestion

Symptoms: No effects on fertility.

Remarks: Based on test data

Effects on fetal development :

Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test

Species: Rat, male and female

Application Route: Ingestion

Symptoms: No effects on fetal development.

Remarks: Based on test data

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Octamethylcyclotetrasiloxane:

Effects on fertility :

Test Type: Two-generation reproduction toxicity study

Species: Rat, male and female

Application Route: inhalation (vapor)

Symptoms: Effects on fertility.

Remarks: Based on test data

Effects on fetal development :

Test Type: Prenatal development toxicity study (teratogenicity)

Species: Rabbit

Application Route: inhalation (vapor)

Symptoms: No effects on fetal development.

Remarks: Based on test data

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Methanol:

Effects on fertility :

Test Type: Fertility/early embryonic development

Species: Mouse

Application Route: Ingestion

Result: negative

Effects on fetal development :

Test Type: Embryo-fetal development

Species: Mouse

Application Route: Ingestion

Method: OECD Test Guideline 414

Result: positive

Remarks: The effects were seen only at maternally toxic doses.

Hexadecyltrimethyl ammonium chloride:

Effects on fertility :

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Method: OECD Test Guideline 416

Result: negative

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Effects on fetal development :

Remarks: Based on data from similar materials
Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Skin contact
Result: negative

STOT-single exposure

Not classified based on available information.

Ingredients:

Methanol:

Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Triethoxyoctylsilane:

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Octamethylcyclotetrasiloxane:

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Routes of exposure: inhalation (vapor)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less

Repeated dose toxicity

Ingredients:

Triethoxyoctylsilane:

Species: Rat
Application Route: Ingestion
Remarks: Based on test data

Ethoxylated lauryl alcohol:

Species: Rat
NOAEL: >= 100 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Method: OECD Test Guideline 408
Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Species: Rat
Application Route: Ingestion
Remarks: Based on test data
Species: Rat
Application Route: inhalation (vapor)

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Remarks: Based on test data
 Species: Rabbit
 Application Route: Skin contact
 Remarks: Based on test data

Methanol:

Species: Rat
 NOAEL: 1.06 mg/l
 Application Route: inhalation (vapor)
 Exposure time: 90 d

Hexadecyltrimethyl ammonium chloride:

Species: Rat
 NOAEL: 300 mg/kg
 Application Route: Ingestion
 Exposure time: 28 d

Aspiration toxicity

Not classified based on available information.

Further information**Ingredients:****Triethoxyoctylsilane:**

Remarks: Findings from a combined repeated-dose toxicity study with reproductive/ developmental screening endpoints on n-octyltriethoxysilane have shown neurological effects in rats at high doses (1000 mg/kg). Paralysis and paresis of the limbs, and demyelination of the brain, spinal cord, sciatic and tibial nerves was noted in some animals.

Octamethylcyclotetrasiloxane:

Remarks: Results from a 2 year repeated vapor inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (<http://www.ec.gc.ca/eseees/default.asp?lang=En&n=2481B508-1>). Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

SECTION 12 – ECOLOGICAL INFORMATION
Ecotoxicity:**Ingredients:****Triethoxyoctylsilane:**

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia sp.): > 0.049 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: No toxicity at the limit of solubility.

Toxicity to algae:

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.13 mg/l

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Ethoxylated lauryl alcohol:

Toxicity to fish :

Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility.

LC50 (Danio rerio (zebra fish)): > 1 - 10 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h

Toxicity to algae :

Remarks: Based on data from similar materials
EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.1 - 1 mg/l

Exposure time: 72 h

Remarks: Based on data from similar materials
NOEC (Pseudokirchneriella subcapitata (green algae)): > 0.1 - 1 mg/l

Exposure time: 72 h

Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity :

1

Toxicity to fish (Chronic toxicity) :

NOEC (Lepomis macrochirus (Bluegill sunfish)): > 0.1 - 1 mg/l

Exposure time: 30 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): > 0.1 - 1 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Toxicity to fish :

LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.022 mg/l

Exposure time: 96 h

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia sp.): > 0.015 mg/l

Exposure time: 48 h

Remarks: No toxicity at the limit of solubility.

Toxicity to algae :

EC50 (Pseudokirchneriella subcapitata (green algae)): >0.022 mg/l

Exposure time: 96 h

Remarks: No toxicity at the limit of solubility.

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.022 mg/l

Exposure time: 96 h

Toxicity to fish (Chronic toxicity) :

NOEC (Oncorhynchus mykiss (rainbow trout)): >=0.0044 mg/l

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC (Daphnia sp.): > 0.0079 mg/l

Exposure time: 21 d

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M-Factor (Chronic aquatic toxicity) :	Remarks: No toxicity at the limit of solubility. 1
Toxicity to bacteria :	IC50: > 10,000 mg/l Method: ISO 8192
Ecotoxicology Assessment Chronic aquatic toxicity :	May cause long lasting harmful effects to aquatic life.
Methanol: Toxicity to fish :	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h
Toxicity to daphnia and other Aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h
Toxicity to algae :	EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l Exposure time: 96 h Method: OPPTS 850.5400
Toxicity to fish (Chronic toxicity):	NOEC (Oryzias latipes (Orange-red killifish)): 15,800 mg/l Exposure time: 200 h
Toxicity to bacteria :	EC50: 20,000 mg/l Exposure time: 15 h
Hexadecyltrimethyl ammonium chloride: Toxicity to fish :	LC50 (Danio rerio (zebra fish)): 0.19 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other Aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0.09 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.05 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Pseudokirchneriella subcapitata (green algae)): 0.047 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity) :	10
Toxicity to fish (Chronic toxicity) :	NOEC (Pimephales promelas (fathead minnow)): 32.2 µg/l Exposure time: 28 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic Invertebrates (Chronic toxicity):	NOEC (Daphnia magna (Water flea)): 6.8 µg/l Exposure time: 21 d Remarks: Based on data from similar materials

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M-Factor (Acute aquatic toxicity):
Toxicity to bacteria :

1
EC50 (Pseudomonas putida): 0.96 mg/l
Exposure time: 16 h
Method: DIN 38 412 Part 8

Persistence and degradability

Ingredients:

Triethoxyoctylsilane:

Biodegradability :

Result: Not readily biodegradable.
Biodegradation: 31.5 %
Method: OECD Test Guideline 301D
Remarks: Based on test data

Ethoxylated lauryl alcohol:

Biodegradability :

Result: rapidly degradable
Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Biodegradability :

Result: Not readily biodegradable.
Biodegradation: 3.7 %
Exposure time: 28 d
Method: OECD Test Guideline 310

Stability in water :

Degradation half life: 69.3 - 144 h (24.6 °C) pH: 7
Method: OECD Test Guideline 111

Methanol:

Biodegradability :

Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 20 d

Hexadecyltrimethyl ammonium chloride:

Biodegradability :

Result: Readily biodegradable.
Biodegradation: 93.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Bioaccumulative potential

Ingredients:

Triethoxyoctylsilane:

Partition coefficient: n- octanol/water :

log Pow: 6.41
Method: OECD Test Guideline 117

Ethoxylated lauryl alcohol:

Bioaccumulation :

Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials

Octamethylcyclotetrasiloxane:

Partition coefficient: n- octanol/water:

log Pow: 6.48 (25.1 °C)

Methanol:

Bioaccumulation :

Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10

Partition coefficient: n- octanol/water:

log Pow: -0.77

Hexadecyltrimethyl ammonium chloride:

Bioaccumulation :

Species: Lepomis macrochirus (Bluegill sunfish)

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<p>Mobility in soil No data available</p> <p>Other adverse effects Octamethylcyclotetrasiloxane: Results of PBT and vPvB assessment:</p>	<p>Bioconcentration factor (BCF): 33 - 160 Remarks: Based on data from similar materials</p> <p>Remarks: Octamethylcyclotetrasiloxane (D4) meets the current REACH Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.</p>
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SECTION 13 – DISPOSAL CONSIDERATIONS

<p><u>13.1 Waste Treatment Methods:</u></p> <p><u>13.2 EU Waste Code:</u></p>	<p>Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.</p> <p>Not determined</p>
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SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:
This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	Not Regulated
Proper Shipping Name:	None
Hazard Class Number and Description:	None
Packing Group:	None
DOT Label(s) Required:	None
North American Emergency Response Guidebook Number:	None

14.2 Environmental Hazards:

Marine Pollutant:	The components of this product are designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
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14.3 Special Precaution for User:

	None
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14.4 International Air Transport Association

Shipping Information (IATA):

This product is considered as dangerous goods.

14.5 International Maritime Organization

Shipping Information (IMO):

UN Identification Number:

Not regulated

Proper Shipping Name:

None

Hazard Class Number and Description:

None

Packing Group:

None

EMS-No:

None

SECTION 15 – REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*
Acetaldehyde	75-07-0	1000	*
2-Butenal	4170-30-3	100	*

*: Calculated RQ exceeds reasonably attainable upper limit

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2-Butenal	4170-30-3	100	*
Vinyl acetate	108-05-4	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit

SARA 311/312 Hazards :

Acute Health Hazard
Chronic Health Hazard

SARA 302 :

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 :

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis)

Pennsylvania Right To Know

Dimethyl, methoxyphenyl siloxane with phenyl silsesquioxane methoxy-terminated Water	68957-04-0	30 - 50 %
Triethoxyoctylsilane	7732-18-5	30 - 50 %
Triethoxyoctylsilane	2943-75-1	10 - 20 %
Dimethyl siloxane, hydroxy-terminated	70131-67-8	10 - 20 %
Methanol	67-56-1	0.1 - 1 %
Acetaldehyde	75-07-0	0 - 0.1 %

New Jersey Right To Know

Dimethyl, methoxyphenyl siloxane with phenyl silsesquioxane methoxy-terminated Water	68957-04-0	30 - 50 %
Triethoxyoctylsilane	7732-18-5	30 - 50 %
Triethoxyoctylsilane	2943-75-1	10 - 20 %

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Dimethyl siloxane, hydroxy-terminated	70131-67-8	10 - 20 %
Dimethyl siloxane with aminoethylaminopro-	68554-54-1	1 - 5 %
pyl silsesquioxane, hydroxy-term		
Methanol	67-56-1	0.1 - 1 %

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

Acetaldehyde

75-07-0

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Methanol

67-56-1

The ingredients of this product are reported in the following inventories:

NZIoC :	All ingredients listed or exempt.
AICS :	All ingredients listed or exempt.
IECSC :	All ingredients listed or exempt.
KECI :	All ingredients listed, exempt or notified.
PICCS :	All ingredients listed or exempt.
DSL :	This product contains one or more substances which are not on the Canadian Domestic Substances List (DSL). Import of this product into Canada has volume limitations. For volume limits please consult Dow Corning Regulatory Compliance.
REACH :	Consult your local Dow Corning office.
TSCA :	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
ENCS/ISHL :	All components are listed on ENCS/ISHL or exempted from inventory listing.

Inventories: AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16 – OTHER INFORMATION

Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

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END OF SDS SHEET