



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** DOWSIL™ 1-2620 Low VOC Conformal Coating

**Issue Date:** 09/06/2018

**Print Date:** 09/07/2018

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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**Product name:** DOWSIL™ 1-2620 Low VOC Conformal Coating

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Semiconductors

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY  
2030 DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids - Category 2

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

### Label elements

#### Hazard pictograms



Signal word: **DANGER!**

### Hazards

Highly flammable liquid and vapour.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause damage to organs (Nervous system) through prolonged or repeated exposure if inhaled.

### Precautionary statements

#### Prevention

Obtain special instructions before use.

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

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/ attention.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

#### Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

#### Disposal

Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

No data available

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Silicone resin solution

This product is a mixture.

Component	CASRN	Concentration
Octamethyltrisiloxane	107-51-7	>= 63.0 - <= 77.0 %
Toluene	108-88-3	>= 2.6 - <= 3.5 %

Methyltrimethoxysilane

1185-55-3

&gt;= 1.8 - &lt;= 2.4 %

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## 4. FIRST AID MEASURES

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### Description of first aid measures

#### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** No emergency medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO<sub>2</sub>) Dry chemical

**Unsuitable extinguishing media:** High volume water jet Do not use direct water stream.

#### Special hazards arising from the substance or mixture

**Hazardous combustion products:** Silicon oxides Carbon oxides Formaldehyde

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Fire burns more vigorously than would be expected. Vapours may form explosive mixtures with air.

#### **Advice for firefighters**

**Fire Fighting Procedures:** Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Do not use a solid water stream as it may scatter and spread fire.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

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

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## **6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Ventilate the area. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. 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:** Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. 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. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. See sections: 7, 8, 11, 12 and 13.

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## **7. HANDLING AND STORAGE**

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**Precautions for safe handling:** Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Avoid contact with eyes. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice.

Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause

an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

**Conditions for safe storage:** Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. Unsuitable materials for containers: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Octamethyltrisiloxane	Dow IHG	TWA	20 ppm
Toluene	ACGIH	TWA	20 ppm
	OSHA Z-2	TWA	200 ppm
	OSHA Z-2	CEIL	300 ppm
	OSHA Z-2	Peak	500 ppm
Methyltrimethoxysilane	Dow IHG	TWA	7.5 ppm
	Dow IHG	TWA	Skin Sensitizer
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	ACGIH	TWA	SKIN
	OSHA Z-1	TWA	260 mg/m3 200 ppm
	ACGIH	STEL	SKIN

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:  
Methanol.

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Toluene	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure)	0.03 mg/l	ACGIH BEI

		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

**Exposure controls**

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

<b>Physical state</b>	liquid
<b>Color</b>	translucent
<b>Odor</b>	slight

<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting point/range</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	101 °C ( 214 °F)
<b>Flash point</b>	<b>Seta closed cup</b> 17 °C ( 63 °F)
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	0.9
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	350 cSt at 25 °C (77 °F)
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Liquid Density</b>	0.9 g/cm <sup>3</sup>
<b>Molecular weight</b>	No data available
<b>Particle size</b>	Not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. Vapours may form explosive mixture with air. Highly flammable liquid and vapour.

**Conditions to avoid:** Heat, flames and sparks.

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:** Methanol. Formaldehyde. Benzene.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

**Acute toxicity**

**Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.  
As product: Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.  
As product: The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene.  
As product: The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.  
Prolonged contact may cause moderate skin irritation with local redness.  
May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

May cause slight eye irritation.  
May cause slight temporary corneal injury.  
Vapor may cause eye irritation experienced as mild discomfort and redness.  
Vapor may cause lacrimation (tears).

**Sensitization**

For skin sensitization:  
Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:  
No relevant information found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in animals:  
Central nervous system.  
Liver.

Excessive exposure may cause neurologic signs and symptoms.  
Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.  
Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.  
This material contains octamethyltrisiloxane (L3). Repeated inhalation exposure in rats to L3 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.

**Carcinogenicity**

Contains component(s) which did not cause cancer in laboratory animals.

**Teratogenicity**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**Reproductive toxicity**

Contains component(s) which did not interfere with reproduction in animal studies.

**Mutagenicity**

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Octamethyltrisiloxane**

**Acute oral toxicity**

LD50, Rat, female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute dermal toxicity**

LD50, Rat, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, vapour, > 22.6 mg/l No deaths occurred at this concentration.

**Toluene**

**Acute oral toxicity**

LD50, Rat, 5,580 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, 12,267 mg/kg

**Acute inhalation toxicity**

Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene. LC50, Rat, male, 4 Hour, vapour, 25.7 mg/l

LC50, Rat, female, 4 Hour, vapour, 30 mg/l

**Methyltrimethoxysilane**

**Acute oral toxicity**

LD50, Rat, male and female, 11,685 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, male and female, > 9,500 mg/kg

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, vapour, 51.6 mg/l

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

### Toxicity

#### Octamethyltrisiloxane

##### **Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 0.0191 mg/l, OECD Test Guideline 203

##### **Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.02 mg/l, OECD Test Guideline 202

##### **Acute toxicity to algae/aquatic plants**

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 0.0094 mg/l, OECD Test Guideline 201

##### **Toxicity to bacteria**

For similar material(s):

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

##### **Chronic toxicity to fish**

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, > 0.027 mg/l

##### **Chronic toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, > 0.015 mg/l

#### Toluene

##### **Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l

##### **Acute toxicity to aquatic invertebrates**

LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3.78 mg/l

##### **Acute toxicity to algae/aquatic plants**

EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 12.5 mg/l, OECD Test Guideline 201

##### **Toxicity to bacteria**

IC50, Bacteria, 16 Hour, 29 mg/l

**Chronic toxicity to fish**

NOEC, Fish, flow-through test, 40 d, growth, 1.4 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 150 - 280 mg/kg

**Methyltrimethoxysilane**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 110 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 122 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 120 mg/l, OECD Test Guideline 201  
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 120 mg/l, OECD Test Guideline 201

**Persistence and degradability**

**Octamethyltrisiloxane**

**Biodegradability:** Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

10-day Window: Not applicable

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310 or Equivalent

**Photodegradation**

**Atmospheric half-life:** 8.94 d

**Method:** Estimated.

**Toluene**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 100 %

**Exposure time:** 14 d

**Method:** OECD Test Guideline 301C or Equivalent

**Theoretical Oxygen Demand:** 3.13 mg/mg Calculated.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitization:** OH radicals

**Atmospheric half-life:** 2 d

**Method:** Estimated.

**Methyltrimethoxysilane**

**Biodegradability:** No relevant data found.

**Bioaccumulative potential**

**Octamethyltrisiloxane**

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 5.35 Estimated.

**Bioconcentration factor (BCF):** >= 500 Pimephales promelas (fathead minnow) OECD Test Guideline 305

**Toluene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 2.73 Measured

**Bioconcentration factor (BCF):** 13.2 - 90 Fish Measured

**Methyltrimethoxysilane**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -2.36

**Mobility in soil**

**Octamethyltrisiloxane**

Potential for mobility in soil is slight (Koc between 2000 and 5000).

**Partition coefficient (Koc):** 3179 Estimated.

**Toluene**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 37 - 178 Estimated.

**Methyltrimethoxysilane**

No relevant data found.

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## 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

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## 14. TRANSPORT INFORMATION

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### DOT

<b>Proper shipping name</b>	Flammable liquids, n.o.s.(Toluene, Methyltrimethoxysilane)
<b>UN number</b>	UN 1993
<b>Class</b>	3
<b>Packing group</b>	II
<b>Reportable Quantity</b>	Toluene

### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	FLAMMABLE LIQUID, N.O.S.(Toluene, Methyltrimethoxysilane)
<b>UN number</b>	UN 1993
<b>Class</b>	3
<b>Packing group</b>	II
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

### Classification for AIR transport (IATA/ICAO):

<b>Proper shipping name</b>	Flammable liquid, n.o.s.(Toluene, Methyltrimethoxysilane)
<b>UN number</b>	UN 1993
<b>Class</b>	3
<b>Packing group</b>	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Flammable (gases, aerosols, liquids, or solids)  
Respiratory or skin sensitisation  
Reproductive toxicity

Specific target organ toxicity (single or repeated exposure)

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CASRN
Toluene	108-88-3

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Toluene	108-88-3	1000 lbs RQ
Toluene	108-88-3	100 lbs RQ (F005)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)
Toluene	108-88-3	1000 lbs RQ
Toluene	108-88-3	100 lbs RQ (F005)

**Pennsylvania Right To Know**

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Octamethyltrisiloxane	107-51-7
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2
Toluene	108-88-3

**California Prop. 65**

WARNING: This product can expose you to chemicals including Toluene, Methanol, which is/are 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).

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**

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**Hazard Rating System**

**NFPA**

Health	Flammability	Instability
2	3	0

**HMIS**

Health	Flammability	Physical Hazard
2*	3	0

\* = Chronic Effects (See Hazards Identification)

**Revision**

Identification Number: 4122883 / A001 / Issue Date: 09/06/2018 / Version: 5.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
SKIN	Absorbed via skin
STEL	Short-term exposure limit
TWA	Time weighted average

### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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