



# Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

**Product name:** DOWSIL™ 3145 RTV Mil-A-46146  
Adhesive/Sealant Gray

**Issue Date:** 12.05.2023

**Print Date:** 13.05.2023

DOW CHEMICAL INTERNATIONAL PVT. LTD. 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.

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** DOWSIL™ 3145 RTV Mil-A-46146 Adhesive/Sealant Gray

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

**Identified uses:** Adhesive, binding agents Electrical industry and electronics

**COMPANY IDENTIFICATION**

DOW CHEMICAL INTERNATIONAL PVT. LTD.  
UNIT NO. 801, 8th FLOOR, BUILDING NO. 9,  
GIGAPLEX,  
TTC INDUSTRIAL AREA, MIDC, AIROLI  
NAVI, MUMBAI  
400708 NAVI, MUMBAI  
INDIA

**Customer Information Number:**

(91) 22-6674-1500  
SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 91-22-6674-1800

**Local Emergency Contact:** 0091-22-6674-1800

## 2. HAZARDS IDENTIFICATION

**GHS Classification**

Skin corrosion/irritation - Category 3

Reproductive toxicity - Category 2

Short-term (acute) aquatic hazard - Category 3

Long-term (chronic) aquatic hazard - Category 3

**GHS label elements**

**Hazard pictograms**



Signal word: **WARNING!**

**Hazard statements**

Causes mild skin irritation.  
Suspected of damaging fertility.  
Harmful to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

Obtain, read and follow all safety instructions before use.  
Avoid release to the environment.  
Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

**Response**

IF exposed or concerned, get medical advice.  
If skin irritation occurs: Get medical help.

**Storage**

Store locked up.

**Disposal**

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

**Other hazards**

No data available

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

This product is a mixture.

Component	CASRN	Concentration
Hexamethyldisilazane reaction with Silica	68909-20-6	$\geq 18.0 - \leq 28.0 \%$
Methyltrimethoxysilane	1185-55-3	$\geq 5.8 - \leq 7.6 \%$
Octamethyl Cyclotetrasiloxane	556-67-2	$\geq 0.14 - \leq 0.25 \%$

Copper acetylacetonate

13395-16-9

$\geq 0.057 - \leq 0.077$   
%

---

## 4. FIRST AID MEASURES

---

### Description of first aid measures

#### General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing; consult a physician.

**Skin contact:** Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

**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.

**Ingestion:** Rinse mouth with water. No emergency medical treatment necessary.

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

Causes mild skin irritation. Suspected of damaging fertility.

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

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

---

## 5. FIREFIGHTING MEASURES

---

### Extinguishing media

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

**Unsuitable extinguishing media:** None known..

### Special hazards arising from the substance or mixture

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

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health..

### Advice for firefighters

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

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

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Personal precautions, protective equipment and emergency procedures:** 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. 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:** Wipe up or scrape up and contain for salvage or disposal. 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, store recovered material in appropriate container.

See sections: 7, 8, 11, 12 and 13.

---

## 7. HANDLING AND STORAGE

---

**Precautions for safe handling:** Do not get on skin or clothing. Avoid contact with eyes. Do not swallow. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.

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
Hexamethyldisilazane reaction with Silica	Dow IHG	TWA Respirable fraction	0.1 mg/m <sup>3</sup>
Methyltrimethoxysilane	Dow IHG	TWA	7.5 ppm

Octamethyl Cyclotetrasiloxane	US WEEL	TWA	10 ppm
Methanol	ACGIH	TWA	200 ppm
	Further information: Skin: Danger of cutaneous absorption		
	ACGIH	STEL	250 ppm
	Further information: Skin: Danger of cutaneous absorption		
	IN OEL	STEL	310 mg/m3 250 ppm
	Further information: Skin: Potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye.		
	IN OEL	TWA	260 mg/m3 200 ppm
	Further information: Skin: Potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye.		

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

Methanol.

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
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 local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields).

##### 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 chloride ("PVC" or "vinyl"). 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.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

### Appearance

Physical state	paste
Color	grey
Odor	slight
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-soluble (in water)
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.12
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Liquid Density	1.12 g/cm <sup>3</sup>
Molecular weight	No data available
Particle size	No data available

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

---

## 10. STABILITY AND REACTIVITY

---

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

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

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. When heated to temperatures above 180 °C (356 °F) in the presence of air, trace quantities of formaldehyde may be released. Adequate ventilation is required.

**Conditions to avoid:** None known.

**Incompatible materials:** Avoid contact with oxidizing materials.

**Hazardous decomposition products:**

Decomposition products can include and are not limited to: Formaldehyde. Methanol.

---

## 11. TOXICOLOGICAL INFORMATION

---

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

**Information on likely routes of exposure**

Eye contact, Skin contact, Ingestion.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute Toxicity Endpoints:**

Not classified based on available information.

**Acute oral toxicity**

**Information for the Product:**

As product: Single dose oral LD50 has not been determined.

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Based on information for component(s):  
LD50, > 5,000 mg/kg Estimated.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials: LD50, Rat, > 2,000 mg/kg OECD 401 or equivalent No deaths occurred at this concentration.

**Methyltrimethoxysilane**

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

This substance may hydrolyze to release Methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

**Octamethyl Cyclotetrasiloxane**

LD50, Rat, male, > 4,800 mg/kg No deaths occurred at this concentration.

**Copper acetylacetonate**

Single dose oral LD50 has not been determined.

LD50, > 2,000 mg/kg Estimated.

**Acute dermal toxicity**

**Information for the Product:**

For similar material(s):

LD50, Rat, > 2,000 mg/kg

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

**Methyltrimethoxysilane**

LD50, Rabbit, male and female, > 9,500 mg/kg OECD 402 or equivalent

This substance may hydrolyze to release Methanol. Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

**Octamethyl Cyclotetrasiloxane**

LD50, Rat, male and female, > 2,400 mg/kg No deaths occurred at this concentration.

**Copper acetylacetonate**

The dermal LD50 has not been determined.

LD50, > 2,000 mg/kg Estimated.

**Acute inhalation toxicity**

**Information for the Product:**

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.



As product: The LC50 has not been determined.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

The LC50 has not been determined.

**Methyltrimethoxysilane**

LC50, Rat, male and female, 6 Hour, vapour, > 7605 ppm OECD Test Guideline 403

This substance may hydrolyze to release Methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

**Octamethyl Cyclotetrasiloxane**

LC50, Rat, male and female, 4 Hour, dust/mist, 36 mg/l OECD Test Guideline 403

**Copper acetylacetonate**

The LC50 has not been determined.

**Skin corrosion/irritation**

Causes mild skin irritation.

**Information for the Product:**

For similar material(s):

Brief contact may cause slight skin irritation with local redness.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials:  
Brief contact is essentially nonirritating to skin.

**Methyltrimethoxysilane**

Brief contact may cause slight skin irritation with local redness.

**Octamethyl Cyclotetrasiloxane**

Brief contact is essentially nonirritating to skin.

**Copper acetylacetonate**

Brief contact may cause skin irritation with local redness.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Information for the Product:**

For similar material(s):

May cause slight temporary eye irritation.

Corneal injury is unlikely.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials:  
May cause irritation or corneal injury due to mechanical action.

**Methyltrimethoxysilane**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Octamethyl Cyclotetrasiloxane**

Essentially nonirritating to eyes.

**Copper acetylacetonate**

May cause eye irritation.

**Sensitization**

**For skin sensitization:**

Not classified based on available information.

**For respiratory sensitization:**

Not classified based on available information.

**Information for the Product:**

Based on data from similar materials  
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

For skin sensitization:  
Based on testing for product(s) in this family of materials:  
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Methyltrimethoxysilane**

For skin sensitization:  
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:  
No relevant data found.

**Octamethyl Cyclotetrasiloxane**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Copper acetylacetonate**

For skin sensitization:  
No relevant data found.

For respiratory sensitization:  
No relevant data found.

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

Not classified based on available information.

**Information for the Product:**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Methyltrimethoxysilane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Octamethyl Cyclotetrasiloxane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Copper acetylacetonate**

May cause respiratory irritation.  
Route of Exposure: Inhalation  
Target Organs: Respiratory Tract

**Aspiration Hazard**

Not classified based on available information.

**Information for the Product:**

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

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

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

**Methyltrimethoxysilane**

Material is not classified as an aspiration hazard based on insufficient data, however materials with low viscosity may be aspirated into the lungs during ingestion or vomiting.

**Octamethyl Cyclotetrasiloxane**

May be harmful if swallowed and enters airways.

**Copper acetylacetonate**

Based on available information, aspiration hazard could not be determined.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

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

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

In animals, effects have been reported on the following organs:

lung

Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

**Methyltrimethoxysilane**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Octamethyl Cyclotetrasiloxane**

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Respiratory tract.

Female reproductive organs.

**Copper acetylacetonate**

No relevant data found.

**Carcinogenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

No relevant data found.

**Methyltrimethoxysilane**

No relevant data found.

**Octamethyl Cyclotetrasiloxane**

Results from a 2 year repeated vapour 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. 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.

**Copper acetylacetonate**

No relevant data found.

**Teratogenicity**

Suspected of damaging fertility.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials: Did not cause birth defects or any other fetal effects in laboratory animals.

**Methyltrimethoxysilane**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Octamethyl Cyclotetrasiloxane**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Copper acetylacetonate**

No relevant data found.

**Reproductive toxicity**

Suspected of damaging fertility.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials: In animal studies, did not interfere with reproduction.

**Methyltrimethoxysilane**

In animal studies, did not interfere with reproduction.

**Octamethyl Cyclotetrasiloxane**

In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.

**Copper acetylacetonate**

No relevant data found.

**Mutagenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hexamethyldisilazane reaction with Silica**

Based on testing for product(s) in this family of materials: In vitro genetic toxicity studies were negative.

**Methyltrimethoxysilane**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

**Octamethyl Cyclotetrasiloxane**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Copper acetylacetonate**

No relevant data found.

---

## **12. ECOLOGICAL INFORMATION**

---

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

**Ecotoxicity**

**Hexamethyldisilazane reaction with Silica**

**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).

Based on testing for product(s) in this family of materials:

LC50, Danio rerio (zebra fish), 96 Hour, > 1,000 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

Based on testing for product(s) in this family of materials:

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, Scenedesmus quadricauda (Green algae), 72 Hour, > 10,000 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

Based on testing for product(s) in this family of materials:

EC50, activated sludge, 3 Hour, Respiration rates., > 1,000 mg/l, OECD Test Guideline 209

**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**

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 3.6 mg/l, OECD Test Guideline 201

No toxicity at the limit of solubility

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, >= 3.6 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC10, activated sludge, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 28 d, number of offspring, >= 10 mg/l

**Octamethyl Cyclotetrasiloxane**

**Acute toxicity to fish**

Based on testing of comparable products: The estimated maximum aqueous concentration of Octamethyl Cyclotetrasiloxane (D4) from migration to water from the product as supplied is below the D4 established no-effect threshold (< 0.0079 mg/L) for aquatic organisms.

**Chronic toxicity to aquatic invertebrates**

Based on testing for product(s) in this family of materials:

Not classified due to data which are conclusive although insufficient for classification.

**Copper acetylacetonate**

**Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

Based on data from similar materials

LL50, Fish, 96 Hour, > 10 - 100 µg/l

**Acute toxicity to aquatic invertebrates**

Based on data from similar materials

EL50, Daphnia magna (Water flea), 48 Hour, > 10 - 100 µg/l

**Acute toxicity to algae/aquatic plants**

Based on data from similar materials

EL50, Algae, 96 Hour, Growth rate, > 10 - 100 µg/l  
Based on data from similar materials  
NOELR, Algae, 96 Hour, Growth rate, > 1 - 10 µg/l

#### **Persistence and degradability**

##### **Hexamethyldisilazane reaction with Silica**

**Biodegradability:** Biodegradation is not applicable.

##### **Methyltrimethoxysilane**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**Biodegradation:** 54 %

**Exposure time:** 28 d

**Method:** Regulation (EC) No. 440/2008, Annex, C.4-A

##### **Octamethyl Cyclotetrasiloxane**

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 3.7 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310

##### **Stability in Water (1/2-life)**

Hydrolysis, DT50, 3.9 d, pH 7, Half-life Temperature 25 °C, OECD Test Guideline 111

##### **Copper acetylacetonate**

**Biodegradability:** No relevant data found.

#### **Bioaccumulative potential**

##### **Hexamethyldisilazane reaction with Silica**

**Bioaccumulation:** No relevant data found.

##### **Methyltrimethoxysilane**

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

**Partition coefficient: n-octanol/water(log Pow):** -0.82 Estimated.

##### **Octamethyl Cyclotetrasiloxane**

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

**Partition coefficient: n-octanol/water(log Pow):** 6.49 Measured

**Bioconcentration factor (BCF):** 12,400 Pimephales promelas (fathead minnow) Measured

##### **Copper acetylacetonate**

**Bioaccumulation:** No relevant data found.

#### **Mobility in Soil**

##### **Hexamethyldisilazane reaction with Silica**



No relevant data found.

**Methyltrimethoxysilane**

No relevant data found.

**Octamethyl Cyclotetrasiloxane**

Partition coefficient (K<sub>oc</sub>): 16596 OECD Test Guideline 106

**Copper acetylacetonate**

No relevant data found.

**Results of PBT and vPvB assessment**

**Hexamethyldisilazane reaction with Silica**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Methyltrimethoxysilane**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Octamethyl Cyclotetrasiloxane**

Octamethylcyclotetrasiloxane (D4) meets the current criteria for PBT and vPvB under REACH Annex XIII or other regionally specific 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.

**Copper acetylacetonate**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Other adverse effects**

**Hexamethyldisilazane reaction with Silica**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Methyltrimethoxysilane**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Octamethyl Cyclotetrasiloxane**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Copper acetylacetonate**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

---

### 13. DISPOSAL CONSIDERATIONS

---

**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 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 SDS SECTION 1: Identified Uses. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: 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 of the waste generator. Do not re-use containers for any purpose.

---

### 14. TRANSPORT INFORMATION

---

**Classification for ROAD and Rail transport:**

Not regulated for transport

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

Not regulated for transport

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

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

Not regulated for transport

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.

## 15. REGULATORY INFORMATION

This product has been classified in accordance with the criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), rev. 8.

## 16. OTHER INFORMATION

### Revision

Identification Number: 2768011 / A146 / Issue Date: 12.05.2023 / Version: 8.0

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)
Dow IHG	Dow Industrial Hygiene Guideline
IN OEL	India. Permissible levels of certain chemical substances in work environment.
STEL	Short-term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals 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; WHMIS - Workplace Hazardous Materials Information System

DOW CHEMICAL INTERNATIONAL PVT. LTD. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

IN