



Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

Product name: DOWSIL™ 888 Silicone Joint Sealant

Issue Date: 10.11.2020

Print Date: 13.07.2021

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™ 888 Silicone Joint Sealant

Recommended use of the chemical and restrictions on use

Identified uses: Construction materials and additives

COMPANY IDENTIFICATION

DOW CHEMICAL INTERNATIONAL PVT. LTD.
GODREJ IT PARK - P2, 1st FLOOR, BLOCK B, 02
LBS ROAD, GODREJ BUSINESS DISTRICT
PIROJSHANAGAR
400079 VIKHROLI, 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
Serious eye damage/eye irritation - Category 2A
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.

Causes serious eye irritation.

Suspected of damaging fertility. Suspected of damaging the unborn child.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

Obtain, read and follow all safety instructions before use.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

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

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned, get medical advice.

If skin irritation occurs: Get medical help.

If eye irritation persists: Get medical help.

Storage

Store locked up.

Disposal

Dispose of contents/ 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
Methylvinyl bis(N-ethylacetamido)silane	87855-59-2	>= 0.5 - <= 2.8 %
Dimethyl, methylhydrogen	68952-53-4	>= 0.8 - <= 2.2 %

siloxane, dehydrogenated,
reaction with hydroxydiethylamine

Quartz	14808-60-7	<= 0.58 %
N-ethylacetamide	625-50-3	>= 0.08 - <= 0.42 %
Impurities in methylvinylbis(N-ethylacetamido)silane	Not available	>= 0.04 - <= 0.21 %
Octamethyl Cyclotetrasiloxane	556-67-2	>= 0.025 - <= 0.21 %

4. FIRST AID MEASURES

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 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: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Rinse mouth with water. 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: 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.

5. FIREFIGHTING MEASURES

Extinguishing media

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

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides. Silicon oxides. Nitrogen oxides (NOx). Formaldehyde.

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. Do not swallow. Do not get in eyes. 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
Quartz	ACGIH	TWA Respirable particulate matter	0.025 mg/m ³ , Silica
	Further information: lung cancer: Lung cancer; pulm fibrosis: Pulmonary fibrosis; A2: Suspected human carcinogen		
	IN OEL	TWA Respirable dust	10 mg/m ³ / (% quartz+2)
	IN OEL	TWA Total dust	30 mg/m ³ / (% quartz+3)
	IN OEL	TWA Dust	10,600 mppcm / % Quartz + 10
	Further information: mppcm : Million particles per cubic metre of air, based on impinger samples counted by light field techniques		
Octamethyl Cyclotetrasiloxane	US WEEL	TWA	10 ppm

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.

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 chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. 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"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a

chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	grey
Odor	Fishy
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup 100 °C
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)	1.48
Water solubility	No data available

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.
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.

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.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is 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 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.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

LD50, Rat, 500 mg/kg Acute toxicity estimate

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

Single dose oral LD50 has not been determined.

Quartz

Single dose oral LD50 has not been determined.

N-ethylacetamide

Based on data from similar materials LD50, Rat, 3,950 mg/kg

Impurities in methylvinylbis(N-ethylacetamido)silane

LD50, 500 mg/kg Acute toxicity estimate

Octamethyl Cyclotetrasiloxane

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

Acute dermal toxicity

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

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, Rabbit, > 2,000 mg/kg Estimated.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

LD50, Rat, > 2,000 mg/kg

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

The dermal LD50 has not been determined.

Quartz

The dermal LD50 has not been determined.

N-ethylacetamide

The dermal LD50 has not been determined.

Impurities in methylvinylbis(N-ethylacetamido)silane

Based on data from similar materials LD50, Rat, > 2,000 mg/kg

Octamethyl Cyclotetrasiloxane

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

Acute inhalation toxicity

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:

Methylvinyl bis(N-ethylacetamido)silane

The LC50 has not been determined.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

The LC50 has not been determined.

Quartz

The LC50 has not been determined.

N-ethylacetamide

Based on data from similar materials LC0, Rat, 8 Hour, vapour, 2.19 mg/l No deaths occurred following exposure to a saturated atmosphere.

Impurities in methylvinylbis(N-ethylacetamido)silane

The LC50 has not been determined.

Octamethyl Cyclotetrasiloxane

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

Skin corrosion/irritation

Based on information for component(s):

Brief contact may cause slight skin irritation with local redness.

May cause drying and flaking of the skin.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

Brief contact may cause slight skin irritation with local redness.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

For similar material(s):

Brief contact may cause skin irritation with local redness.

Quartz

May cause skin irritation due to mechanical abrasion.

May cause drying and flaking of the skin.

N-ethylacetamide

For similar material(s):

Brief contact may cause slight skin irritation with local redness.

Impurities in methylvinylbis(N-ethylacetamido)silane

For similar material(s):

Brief contact may cause slight skin irritation with local redness.

Octamethyl Cyclotetrasiloxane

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Based on information for component(s):

May cause severe eye irritation.

May cause corneal injury.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

For similar material(s):

May cause eye irritation.

Quartz

Solid or dust may cause irritation or corneal injury due to mechanical action.

N-ethylacetamide

For similar material(s):

May cause slight eye irritation.

Impurities in methylvinylbis(N-ethylacetamido)silane

For similar material(s):

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Octamethyl Cyclotetrasiloxane

Essentially nonirritating to eyes.

Sensitization

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

Contains component(s) which have not demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

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

For respiratory sensitization:

No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Quartz

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

N-ethylacetamide

For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Impurities in methylvinylbis(N-ethylacetamido)silane

For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

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.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

Available data are inadequate to determine single exposure specific target organ toxicity.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

Available data are inadequate to determine single exposure specific target organ toxicity.

Quartz

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

N-ethylacetamide

Available data are inadequate to determine single exposure specific target organ toxicity.

Impurities in methylvinylbis(N-ethylacetamido)silane

Available data are inadequate to determine single exposure specific target organ toxicity.

Octamethyl Cyclotetrasiloxane

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

Aspiration Hazard

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

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

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

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

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

Quartz

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

N-ethylacetamide

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

Impurities in methylvinylbis(N-ethylacetamido)silane

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

Octamethyl Cyclotetrasiloxane

May be harmful if swallowed and enters airways.

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)

Based on available data for the component(s), repeated exposures are not anticipated to cause significant adverse effects.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

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

Kidney.

Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

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

N-ethylacetamide

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

Impurities in methylvinylbis(N-ethylacetamido)silane

No relevant data found.

Octamethyl Cyclotetrasiloxane

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

Kidney.

Liver.
Respiratory tract.
Female reproductive organs.

Carcinogenicity

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

Has caused cancer in humans. Has caused cancer in laboratory animals. Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

N-ethylacetamide

No relevant data found.

Impurities in methylvinylbis(N-ethylacetamido)silane

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.

Teratogenicity

Contains component(s) which caused birth defects in lab animals at doses nontoxic to the mother.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

N-ethylacetamide

Has caused birth defects in laboratory animals at doses nontoxic to the mother.

Impurities in methylvinylbis(N-ethylacetamido)silane

No relevant data found.

Octamethyl Cyclotetrasiloxane

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

Reproductive toxicity

Contains component(s) which have been shown to interfere with reproduction in animal studies.

Contains component(s) which have interfered with fertility in animal studies.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

In animal studies, has been shown to interfere with reproduction. In animal studies, has been shown to interfere with fertility.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

No relevant data found.

N-ethylacetamide

No relevant data found.

Impurities in methylvinylbis(N-ethylacetamido)silane

In animal studies, has been shown to interfere with reproduction. In animal studies, has been shown to interfere with fertility.

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.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

Information for components:

Methylvinyl bis(N-ethylacetamido)silane

In vitro genetic toxicity studies were negative.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

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

N-ethylacetamide

In vitro genetic toxicity studies were negative. For similar material(s): Animal genetic toxicity studies were negative.

Impurities in methylvinylbis(N-ethylacetamido)silane

In vitro genetic toxicity studies were negative.

Octamethyl Cyclotetrasiloxane

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

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Methylvinyl bis(N-ethylacetamido)silane

Acute toxicity to fish

LC50, Danio rerio (zebra fish), 96 Hour, > 100 mg/l

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 100 mg/l, OECD Test Guideline 203

NOEC, Oncorhynchus mykiss (rainbow trout), 96 Hour, 50 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 69 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 100 mg/l

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

Acute toxicity to aquatic invertebrates

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

Based on data from similar materials

EC50, Daphnia magna (Water flea), 48 Hour, > 0.11 - 1 mg/l

Quartz

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

N-ethylacetamide

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Based on data from similar materials

LC50, Leuciscus idus (Golden orfe), 96 Hour, 3,390 mg/l, DIN 38412

Acute toxicity to aquatic invertebrates

Based on data from similar materials

EC50, Daphnia magna (Water flea), 48 Hour, > 580 mg/l, DIN 38412

Acute toxicity to algae/aquatic plants

Based on data from similar materials

EC50, *Desmodesmus subspicatus* (green algae), 96 Hour, > 500 mg/l

Toxicity to bacteria

Based on data from similar materials

EC10, *Pseudomonas putida*, 17 Hour, > 10,000 mg/l, DIN 38 412 Part 8

Octamethyl Cyclotetrasiloxane

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, 96 Hour, > 0.022 mg/l

No toxicity at the limit of solubility

LC50, *Cyprinodon variegatus* (sheepshead minnow), flow-through, 14 d, > 0.0063 mg/l

Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, *Mysidopsis bahia* (opossum shrimp), flow-through test, 96 Hour, > 0.0091 mg/l

No toxicity at the limit of solubility

EC50, *Daphnia magna* (Water flea), flow-through test, 48 Hour, > 0.015 mg/l

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate, > 0.022 mg/l

Chronic toxicity to fish

No toxicity at the limit of solubility

NOEC, *Oncorhynchus mykiss* (rainbow trout), 93 d, >= 0.0044 mg/l

Chronic toxicity to aquatic invertebrates

No toxicity at the limit of solubility

NOEC, *Daphnia magna* (Water flea), 21 d, >= 0.0079 mg/l

Persistence and degradability

Methylvinyl bis(N-ethylacetamido)silane

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: 62.66 %

Method: OECD Test Guideline 301B

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail For similar material(s):

Biodegradation: 0.43 %

Exposure time: 29 d

Method: OECD Test Guideline 301B

Quartz

Biodegradability: Biodegradation is not applicable.

N-ethylacetamide

Biodegradability: Material has inherent, ultimate biodegradability according to OECD test (s) guidelines (reaches > 60 or 70% biodegradation in OECD test(s)).

Based on data from similar materials

Biodegradation: 100 %

Exposure time: 6 d

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, 69.3 - 144 Hour, pH 7, Half-life Temperature 24.6 °C, OECD Test Guideline 111

Bioaccumulative potential**Methylvinyl bis(N-ethylacetamido)silane**

Bioaccumulation: No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

Bioaccumulation: No relevant data found.

Quartz

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

N-ethylacetamide

Bioaccumulation: No relevant data found.

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

Mobility in Soil**Methylvinyl bis(N-ethylacetamido)silane**

No relevant data found.

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

No relevant data found.

Quartz

No relevant data found.

N-ethylacetamide

No relevant data found.

Octamethyl Cyclotetrasiloxane

Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient (Koc): 16596 OECD Test Guideline 106

Results of PBT and vPvB assessment**Methylvinyl bis(N-ethylacetamido)silane**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Quartz

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

N-ethylacetamide

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Impurities in methylvinylbis(N-ethylacetamido)silane

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Octamethyl Cyclotetrasiloxane

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.

Other adverse effects**Methylvinyl bis(N-ethylacetamido)silane**

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

Dimethyl, methylhydrogen siloxane, dehydrogenated, reaction with hydroxydiethylamine

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

Quartz

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

N-ethylacetamide

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

Impurities in methylvinylbis(N-ethylacetamido)silane

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.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

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: 4105349 / A146 / Issue Date: 10.11.2020 / Version: 6.0

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)
IN OEL	India. Permissible levels of certain chemical substances in work environment.
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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; 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

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