chanhvinh.com

Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

Product name: DOWSIL™ EE-9000 Primerless RTV Encapsulant Catalyst

Issue Date: 05.09.2025

Print Date: 08.09.2025

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™ EE-9000 Primerless RTV Encapsulant Catalyst

Recommended use of the chemical and restrictions on use
Identified uses: 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
Flammable liquids - Category 4
Acute toxicity - Category 5 - Inhalation
Skin corrosion/irritation - Sub-category 1C
Serious eye damage/eye irritation - Category 1
Skin sensitisation - Category 1
Reproductive toxicity - Category 2

GHS label elements
Hazard pictograms

chanhvinh.com



Signal word: **DANGER!**

Hazard statements

H227	Combustible liquid.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H333	May be harmful if inhaled.
H361d	Suspected of damaging the unborn child.

Precautionary statements

Prevention

P203	Obtain, read and follow all safety instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist or vapours.
P264 + P265	Wash hands thoroughly after handling. Do not touch eyes.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P361 + P354	IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304 + P340 + P316	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.
P305 + P354 + P338 + P317	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
P318	IF exposed or concerned, get medical advice.
P333 + P317	If skin irritation or rash occurs: Get medical help.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage

P403	Store in a well-ventilated place.
P405	Store locked up.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

chanhvinh.com

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Tetrapropyl orthosilicate	682-01-9	>= 21.0 - <= 24.0 %
3-Aminopropyltriethoxysilane	919-30-2	>= 19.0 - <= 21.0 %
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane	68928-76-7	>= 0.29 - <= 0.62 %
Bis[3-(triethoxysilyl)propyl]amine	13497-18-2	<= 0.11 %

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. 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: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Suitable emergency safety shower facility should be immediately available.

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: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

Most important symptoms and effects, both acute and delayed:
May cause an allergic skin reaction. Causes serious eye damage. May be harmful if inhaled. Suspected of damaging the unborn child. Causes severe burns.

chanhvinh.com

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns and/or ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal or esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry sand.

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

Special hazards arising from the substance or mixture

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

Unusual Fire and Explosion Hazards: Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.. Vapours may form explosive mixtures with air..

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.. 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. 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:
Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

chanhvinh.com

Environmental precautions: Discharge into the environment must be avoided. 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 absorbant. 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 breathe vapours or spray mist. Do not swallow. Do not get in 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. 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 evenafter container is emptied.
Use with local exhaust ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

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. 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
3-Aminopropyltriethoxysilane	Dow IHG	TWA	0.5 mg/m3
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
Ethanol	ACGIH	STEL	1,000 ppm
	Further information: URT irr: Upper Respiratory Tract irritation		

chanhvinh.com

	IN OEL	TWA	1,900 mg/m3 1,000 ppm
Propyl alcohol	ACGIH	TWA	100 ppm
	Further information: A4: Not classifiable as a human carcinogen		

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

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. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). 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. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Multi-gas cartridge with particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	colourless
Odor	slight
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-soluble (in water)

chanhvinh.com

Melting point/ range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	> 35 °C
Flash point	**Seta closed cup** 76 °C
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not applicable
Flammability (liquids)	Not applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	0.98
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	900 mPa.s
Kinematic Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	not applicable

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 150 °C (300 °F) in the presence of air, product can form formaldehyde vapours. Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formaldehyde. Vapours may form explosive mixture with air.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Avoid contact with oxidizing materials.

Hazardous decomposition products:
Decomposition products can include and are not limited to: Formaldehyde. Propyl alcohol. Ethanol.

chanhvinh.com

11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure
Inhalation, 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:
May be harmful if inhaled.

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract.

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:

Tetrapropyl orthosilicate
LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 423 No deaths occurred at this concentration.

3-Aminopropyltriethoxysilane
LD50, Rat, female, 1,479 mg/kg

LD50, Rat, male, 2,665 mg/kg

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
LD50, Rat, male and female, 892 mg/kg OECD 401 or equivalent

Bis[3-(triethoxysilyl)propyl]amine
LD50, Rat, male, 3,657 mg/kg OECD Test Guideline 401

LD50, Rat, female, 6,106 mg/kg OECD Test Guideline 401

Acute dermal toxicity

Information for the Product:

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

As product: The dermal LD50 has not been determined.

chanhvinh.com

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

Information for components:

Tetrapropyl orthosilicate
LD50, > 2,000 mg/kg Estimated.

3-Aminopropyltriethoxysilane
Based on product testing: LD50, Rabbit, male and female, 4,041 mg/kg

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
LD50, Rat, > 2,000 mg/kg

Bis[3-(triethoxysilyl)propyl]amine
LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

Acute inhalation toxicity

Information for the Product:

Vapor concentrations are attainable which could be hazardous on single exposure. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

As product: The LC50 has not been determined.

Information for components:

Tetrapropyl orthosilicate
LC50, Rat, male and female, 4 Hour, dust/mist, > 1 - 5 mg/l OECD Test Guideline 403

3-Aminopropyltriethoxysilane
Based on product testing: LC50, Rat, male, 6 Hour, vapour, > 5 ppm No deaths occurred at this concentration.

Based on product testing: LC50, Rat, female, 6 Hour, vapour, > 16 ppm No deaths occurred at this concentration.

Based on product testing: LC50, Rat, male and female, 4 Hour, Aerosol, > 7.35 mg/l

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
As product: The LC50 has not been determined.

Bis[3-(triethoxysilyl)propyl]amine
The LC50 has not been determined.

Skin corrosion/irritation

chanhvinh.com

Causes severe burns.

Information for the Product:

Based on product testing:
Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Information for components:

Tetrapropyl orthosilicate
Brief contact may cause slight skin irritation with local redness.

3-Aminopropyltriethoxysilane
Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Brief contact may cause skin irritation with local redness.

Bis[3-(triethoxysilyl)propyl]amine
Brief contact may cause slight skin irritation with local redness.
Effects may be slow to heal.

Serious eye damage/eye irritation

Causes serious eye damage.

Information for the Product:

Based on information for component(s):
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.
Vapor or mist may cause eye irritation.

Information for components:

Tetrapropyl orthosilicate
May cause slight temporary eye irritation.
May cause slight temporary corneal injury.

3-Aminopropyltriethoxysilane
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.
Vapor or mist may cause eye irritation.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
May cause slight eye irritation.
May cause slight temporary corneal injury.

Bis[3-(triethoxysilyl)propyl]amine
May cause severe eye irritation.
May cause slight corneal injury.

chanhvinh.com

Sensitization

For skin sensitization:
May cause an allergic skin reaction.

For respiratory sensitization:
Not classified based on available information.

Information for the Product:

For skin sensitization:
Contains component(s) which have demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant information found.

Information for components:

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

For respiratory sensitization:
No relevant data found.

3-Aminopropyltriethoxysilane
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Bis[3-(triethoxysilyl)propyl]amine
For skin sensitization:
Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Not classified based on available information.

Information for the Product:

Product test data not available.

chanhvinh.com

Information for components:

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

3-Aminopropyltriethoxysilane
Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Available data are inadequate to determine single exposure specific target organ toxicity.

Bis[3-(triethoxysilyl)propyl]amine
Based on product testing:

Aspiration Hazard

Not classified based on available information.

Information for the Product:

Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

Information for components:

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

3-Aminopropyltriethoxysilane
Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Based on physical properties, not likely to be an aspiration hazard.

Bis[3-(triethoxysilyl)propyl]amine
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:

chanhvinh.com

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

3-Aminopropyltriethoxysilane
In animals, effects have been reported on the following organs:
Liver.
Dose levels producing any effects were higher than the trigger dose for classification and labelling according to GHS regulations.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
In animals, effects have been reported on the following organs:
Blood
Kidney
Liver
Immune system.
Nervous system.

Bis[3-(triethoxysilyl)propyl]amine
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
No relevant data found.

3-Aminopropyltriethoxysilane
Did not cause cancer in laboratory animals.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
No relevant data found.

Bis[3-(triethoxysilyl)propyl]amine
No relevant data found.

Teratogenicity

Suspected of damaging the unborn child.

Information for the Product:

Product test data not available.

chanhvinh.com

Information for components:

Tetrapropyl orthosilicate
For similar material(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

3-Aminopropyltriethoxysilane
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Based on testing for a similar material: Oral exposure in laboratory animals: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Has caused birth defects in laboratory animals only at doses toxic to the mother.

Bis[3-(triethoxysilyl)propyl]amine
Oral Rat
Dose: 500
150 mg/kg
Test period: 28 days

Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive toxicity

Suspected of damaging the unborn child.

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
For similar material(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

3-Aminopropyltriethoxysilane
In animal studies, did not interfere with fertility.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
No relevant data found.

Bis[3-(triethoxysilyl)propyl]amine
In animal studies, did not interfere with reproduction.

Oral Rat
Dose: 500
Exposure time: 28 days

Mutagenicity

Not classified based on available information.

chanhvinh.com

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
In vitro genetic toxicity studies were negative.

3-Aminopropyltriethoxysilane
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Bis[3-(triethoxysilyl)propyl]amine
In vitro genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
Acute toxicity to fish
Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).
For similar material(s):
LC50, Brachydanio rerio (zebrafish), 96 Hour, > 201 mg/l

Acute toxicity to aquatic invertebrates
For similar material(s):
EC50, Daphnia sp. (water flea), 48 Hour, > 90 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
For similar material(s):
ErC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate, > 161 mg/l
For similar material(s):
NOEC, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate, 110 mg/l

Toxicity to bacteria
For similar material(s):

chanhvinh.com

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

3-Aminopropyltriethoxysilane

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, Danio rerio (zebra fish), semi-static test, 96 Hour, > 934 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 331 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1.3 mg/l

Toxicity to bacteria

EC50, Pseudomonas putida, 5.75 Hour, Respiration rates., 43 mg/l

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

Acute toxicity to fish

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
For similar material(s):
LC50, Zebra fish (Danio/Brachydanio rerio), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna, static test, 48 Hour, 39 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Algae (Scenedesmus subspicatus), Growth rate, 72 Hour, Growth rate, 7.6 mg/l, OECD Test Guideline 201 or Equivalent
For similar material(s):
NOEC, Algae (Scenedesmus subspicatus), Growth rate, 72 Hour, Growth rate, 1.1 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

For similar material(s):
EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

Bis[3-(triethoxysilyl)propyl]amine

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, Scophthalmus maximus (turbot), 96 Hour, > 200 mg/l, OECD Test Guideline 203 or Equivalent

chanhvinh.com

Acute toxicity to aquatic invertebrates
EC50, Daphnia (water flea), 48 Hour, > 151.9 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Phaeodactylum, 72 Hour, Growth rate, 125 mg/l
NOEC, Phaeodactylum, 72 Hour, Growth rate, 51 mg/l

Toxicity to bacteria
EC50, activated sludge, 3 Hour, Respiration rates., 1,000 mg/l, OECD 209 Test

Persistence and degradability

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
Biodegradability: For similar material(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

3-Aminopropyltriethoxysilane
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.
10-day Window: Fail
Biodegradation: 67 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Stability in Water (1/2-life)
Hydrolysis, half-life, 8.5 Hour, pH 7, Half-life Temperature 24.7 °C

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Biodegradability: For similar material(s): Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
For similar material(s): 10-day Window: Fail
Biodegradation: 3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Bis[3-(triethoxysilyl)propyl]amine
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: 64.5 %
Exposure time: 28 d
Method: OECD Test Guideline 306 or Equivalent

chanhvinh.com

10-day Window: Fail
Biodegradation: 57 %
Exposure time: 28 d
Method: OECD Test Guideline 301

Bioaccumulative potential

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.4 Estimated by Structure-Activity Relationship (SAR).

3-Aminopropyltriethoxysilane
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 1.7 at 20 °C Calculated.
Bioconcentration factor (BCF): 3.4 Cyprinus carpio (Carp) 56 d

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
Bioaccumulation: No relevant data found.

Bis[3-(triethoxysilyl)propyl]amine
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -4 Estimated by Structure-Activity Relationship (SAR).

Mobility in Soil

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
No relevant data found.

3-Aminopropyltriethoxysilane
No relevant data found.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
No relevant data found.

Bis[3-(triethoxysilyl)propyl]amine
No relevant data found.

Results of PBT and vPvB assessment

chanhvinh.com

Information for the Product:

Product test data not available.

Information for components:

Tetrapropyl orthosilicate
Substance is not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).

3-Aminopropyltriethoxysilane
Substance is not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
No data available

Bis[3-(triethoxysilyl)propyl]amine
Substance is not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).

Other adverse effects

Information for the Product:

Product test data not available.

Information for components:

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

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Bis[3-(triethoxysilyl)propyl]amine
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

chanhvinh.com

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:

Proper shipping name	CORROSIVE LIQUID, N.O.S.(Alkoxysilane)
UN number	UN 1760
Class	8
Packing group	III

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CORROSIVE LIQUID, N.O.S.(Alkoxysilane)
UN number	UN 1760
Class	8
Packing group	III
Marine pollutant	No
Special precautions for user	EmS: F-A, S-B
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):

Proper shipping name	Corrosive liquid, n.o.s.(Alkoxysilane)
UN number	UN 1760
Class	8
Packing group	III

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.

chanhvinh.com

15. REGULATORY INFORMATION

This product has been classified in accordance with the criteria of the Globally Harmonized System of Classification and Labellingof Chemicals (GHS), rev. 9.

16. OTHER INFORMATION

Revision
Identification Number: 99163337 / A146 / Issue Date: 05.09.2025 / Version: 7.0

In case this version of the SDS contains significant changes from the previous version, they are listed below or noted by bold, double bars in the left-hand margin throughout this document.
Changes encompass identification, hazards, tox/eco-tox information and the addition/removal of the ingredients, and regulatory information, hazard information, uses, risk management measures and other key regulatory changes of the product. Detailed explanation of the changes can be obtained upon request.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
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

Full text of other abbreviations
AIIC - 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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous

chanhvinh.com

Goods; 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 - Organisation 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 informationherein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express orimplied, 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