Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

Product name: SILASTIC™ RTV-3000 F Catalyst

Issue Date: 11.10.2021
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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: SILASTIC™ RTV-3000 F Catalyst

Recommended use of the chemical and restrictions on use
Identified uses: Vulcanising agents

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
Serious eye damage/eye irritation - Category 1
Skin sensitisation - Category 1
Reproductive toxicity - Category 2
Short-term (acute) aquatic hazard - Category 3

GHS label elements
Hazard pictograms

Signal word: **DANGER!**

Hazard statements
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.
Harmful to aquatic life.

Precautionary statements

Prevention
Obtain, read and follow all safety instructions before use.
Avoid breathing mist or vapours.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
IF exposed or concerned, get medical advice.
If skin irritation or rash 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
Cristobalite	14464-46-1	<= 25.0 %
Tin bis(2-ethylhexanoate)	301-10-0	>= 3.0 - < 5.0 %

Quartz	14808-60-7	<= 1.8 %
Ethylhexanoic acid	149-57-5	<= 0.17 %

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: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation or rash occurs. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, 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: Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. 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: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

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

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

Methods and materials for containment and cleaning up: Soak up with inert absorbent material. 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. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Keep container tightly closed. 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. Keep tightly closed. 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
Cristobalite	ACGIH	TWA Respirable particulate matter	0.025 mg/m3 , Silica
	Further information: lung cancer: Lung cancer; pulm fibrosis: Pulmonary fibrosis; A2: Suspected human carcinogen		
	IN OEL	TWA Total dust	15 mg/m3 / (% quartz+3)
	IN OEL	TWA Respirable dust	5 mg/m3 / (% quartz+2)
	IN OEL	TWA Dust	5,300 mppcm / % Quartz + 10
	Further information: mppcm : Million particles per cubic metre of air, based on impinger samples counted by light field techniques		
Tin bis(2-ethylhexanoate)	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		
	Dow IHG	TWA	2 mg/m3
	Dow IHG	STEL	4 mg/m3
Quartz	ACGIH	TWA Respirable particulate matter	0.025 mg/m3 , Silica
	Further information: lung cancer: Lung cancer; pulm fibrosis: Pulmonary fibrosis; A2: Suspected human carcinogen		
	IN OEL	TWA Respirable dust	10 mg/m3 / (% quartz+2)
	IN OEL	TWA Total dust	30 mg/m3 / (% 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		
Ethylhexanoic acid	ACGIH	TWA Inhalable fraction and vapor	5 mg/m3

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.

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, 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.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	viscous liquid
Color	Straw-coloured
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)	> 65 °C
Flash point	**closed cup** >101.1 °C
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not applicable
Flammability (liquids)	Ignitable (see flash point)
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)	1.2
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	150 Pa.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 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.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is 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 oral toxicity

Information for the Product:

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:

Cristobalite
Single dose oral LD50 has not been determined.

Tin bis(2-ethylhexanoate)
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat, 5,870 mg/kg

Quartz
Single dose oral LD50 has not been determined.

Ethylhexanoic acid
LD50, Rat, female, 2,043 mg/kg

Acute dermal toxicity

Information for the Product:

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:

Cristobalite
The dermal LD50 has not been determined.

Tin bis(2-ethylhexanoate)
LD50, Rabbit, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

Quartz
The dermal LD50 has not been determined.

Ethylhexanoic acid
LD50, Rat, male and female, > 2,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

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:

Cristobalite
Vapors are unlikely due to physical properties. Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs. Excessive exposure may cause lung injury.

The LC50 has not been determined.

Tin bis(2-ethylhexanoate)
The LC50 has not been determined.

Quartz
The LC50 has not been determined.

Ethylhexanoic acid
LC50, Rat, 8 Hour, vapour, > 0.11 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Information for the Product:

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:

Cristobalite
May cause skin irritation due to mechanical abrasion.
May cause drying and flaking of the skin.

Tin bis(2-ethylhexanoate)
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Quartz
May cause skin irritation due to mechanical abrasion.
May cause drying and flaking of the skin.

Ethylhexanoic acid
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause severe skin irritation with local redness and discomfort.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

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.

Information for components:

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

Tin bis(2-ethylhexanoate)
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

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

Ethylhexanoic acid
May cause slight eye irritation.
May cause slight temporary corneal injury.

Sensitization

Information for the Product:

Based on information for component(s):
Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:
No relevant data found.

Information for components:

Cristobalite
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Tin bis(2-ethylhexanoate)
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Quartz
For skin sensitization:
No relevant data found.

For respiratory sensitization:

No relevant data found.

Ethylhexanoic acid
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)

Information for the Product:

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

Information for components:

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

Tin bis(2-ethylhexanoate)
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.

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

Aspiration Hazard

Information for the Product:

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

Information for components:

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

Tin bis(2-ethylhexanoate)
Based on physical properties, not likely to be an aspiration hazard.

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

Ethylhexanoic acid
Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

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)

Information for the Product:

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:

Cristobalite
Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.
For similar material(s):
In humans, effects have been reported on the following organs:
Kidney.
Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

Tin bis(2-ethylhexanoate)
For the hydrolysis product(s)
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

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.

Ethylhexanoic acid
In animals, effects have been reported on the following organs:
Liver.

Carcinogenicity

Information for the Product:

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:

Cristobalite
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.

Tin bis(2-ethylhexanoate)
For the hydrolysis product(s) Did not cause cancer in laboratory animals.

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.

Ethylhexanoic acid
No relevant data found.

Teratogenicity

Information for the Product:

Contains component(s) which, in laboratory animals, have been toxic to the fetus at doses nontoxic to the mother.

Information for components:

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

Tin bis(2-ethylhexanoate)
For the hydrolysis product(s) Did not cause birth defects in laboratory animals.

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

Ethylhexanoic acid
Has been toxic to the fetus in lab animals at doses nontoxic to the mother. Did not cause birth defects in laboratory animals.

Reproductive toxicity

Information for the Product:

In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

Information for components:

Cristobalite
No relevant data found.

Tin bis(2-ethylhexanoate)
For the hydrolysis product(s) In animal studies, has been shown to interfere with fertility.

Quartz
No relevant data found.

Ethylhexanoic acid
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity

Information for the Product:

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Genetic toxicity studies in animals were negative for component(s) tested.

Information for components:

Cristobalite
For similar material(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Tin bis(2-ethylhexanoate)
For the hydrolysis product(s) In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

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

Ethylhexanoic acid
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

Cristobalite

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

Tin bis(2-ethylhexanoate)

Acute toxicity to fish
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 116 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, water flea Daphnia magna, 48 Hour, 66.3 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 6.9 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 0.54 mg/l

Quartz

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Ethylhexanoic acid

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).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 70 mg/l
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 180 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna, 48 Hour, 85.4 - 106 mg/l

Acute toxicity to algae/aquatic plants
EbC50, Algae (Scenedesmus subspicatus), 96 Hour, Biomass, 41 mg/l

Toxicity to bacteria
IC50, activated sludge, 0.5 Hour, > 650 mg/l, OECD 209 Test
EC50, Bacteria, 17 Hour, 110 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 25 mg/l

Persistence and degradability

Cristobalite
Biodegradability: Biodegradation is not applicable.

Tin bis(2-ethylhexanoate)
Biodegradability: For the hydrolysis product(s) Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent

Quartz
Biodegradability: Biodegradation is not applicable.

Ethylhexanoic acid
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material has inherent, ultimate biodegradability according to OECD test (s) guidelines (reaches > 60 or 70% biodegradation in OECD test(s).
10-day Window: Pass
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Not applicable
Biodegradation: 95 %
Exposure time: 5 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 2.44 mg/mg

Chemical Oxygen Demand: 2.11 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals
Atmospheric half-life: 1.3 d
Method: Estimated.

Bioaccumulative potential

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

Tin bis(2-ethylhexanoate)
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.64 estimated

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

Ethylhexanoic acid
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.64 Measured
Bioconcentration factor (BCF): 3 Fish Method Not Specified.

Mobility in Soil

Cristobalite
No relevant data found.

Tin bis(2-ethylhexanoate)
Partition coefficient (Koc): 41.3 Estimated.

Quartz
No relevant data found.

Ethylhexanoic acid
Partition coefficient (Koc): 650 Estimated.

Results of PBT and vPvB assessment

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

Tin bis(2-ethylhexanoate)
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).

Ethylhexanoic acid
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

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

Tin bis(2-ethylhexanoate)

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.

Ethylhexanoic acid

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 solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

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

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: 4107676 / A146 / Issue Date: 11.10.2021 / Version: 7.0
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)
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 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

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