SAFETY DATA SHEET
DOW CHEMICAL THAILAND LTD

Product name: DOWSIL™ 969 Emulsion

Issue Date: 21.04.2022
Print Date: 22.04.2022

DOW CHEMICAL THAILAND 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™ 969 Emulsion

Recommended use of the chemical and restrictions on use
Identified uses: Cosmetics

COMPANY IDENTIFICATION
DOW CHEMICAL THAILAND LTD
99/1 BJC 2 BUILDING,
SOI SAENGCHAN-RUBIA,
SUKHUMVIT 42 ROAD, PRAKANONG, KLONGTOEY,
BANGKOK 10110
THAILAND

Customer Information Number: (66)2-3657000
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: (66)38-925-400
Local Emergency Contact: 038-925-400

2. HAZARDS IDENTIFICATION

GHS Classification
Skin corrosion/irritation - Category 2
Serious eye damage/eye irritation - Category 1
Short-term (acute) aquatic hazard - Category 2
Long-term (chronic) aquatic hazard - Category 3

GHS label elements
Hazard pictograms

Signal word: **DANGER!**

Hazard statements
Causes skin irritation.
Causes serious eye damage.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention
Wash skin thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/ eye protection/ face protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

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
Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated	68554-54-1	>= 31.0 - <= 33.0 %
Hexadecyltrimethyl ammonium chloride	112-02-7	>= 2.3 - <= 2.4 %
Isotridecanol, ethoxylated	69011-36-5	>= 1.9 - <= 2.2 %
Ethoxylated branched C11-14, C13-rich alcohols	78330-21-9	>= 1.9 - <= 2.2 %

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: 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: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed:
Causes skin irritation. Causes serious eye damage.

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.

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: Nitrogen oxides (NOx). Silicon oxides. Carbon oxides. Chlorine compounds.

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. 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.

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"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). 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 discomfort is experienced, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	white milky
Odor	characteristic
Odor Threshold	No data available
pH	6
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	> 35 °C
Flash point	**closed cup** >100 °C
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	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)	1.0
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	10 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.

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. Ammonia. hydrogen chloride.

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 Toxicity Endpoints:
Not classified based on available information.

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Swallowing may result in irritation 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:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
Single dose oral LD50 has not been determined.

Hexadecyltrimethyl ammonium chloride
LD50, Rat, 699 mg/kg

Isotridecanol, ethoxylated
LD50, Rat, > 5,000 mg/kg

Ethoxylated branched C11-14, C13-rich alcohols
Acute toxicity estimate, 500 mg/kg Expert judgement

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:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
The dermal LD50 has not been determined.

Hexadecyltrimethyl ammonium chloride
Absorption has not been determined due to corrosivity.

Isotridecanol, ethoxylated
The dermal LD50 has not been determined.

Ethoxylated branched C11-14, C13-rich alcohols
The dermal LD50 has not been determined.

Acute inhalation toxicity

Information for the Product:

Brief exposure (minutes) is not likely to cause adverse effects. Excessive exposure may cause: Respiratory tract irritation

As product: The LC50 has not been determined.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
The LC50 has not been determined.

Hexadecyltrimethyl ammonium chloride
The LC50 has not been determined.

Isotridecanol, ethoxylated
The LC50 has not been determined.

Ethoxylated branched C11-14, C13-rich alcohols
The LC50 has not been determined.

Skin corrosion/irritation

Causes skin irritation.

Information for the Product:

Based on information for component(s):
Brief contact may cause skin irritation with local redness.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
For similar material(s):
Brief contact may cause skin irritation with local redness.

Hexadecyltrimethyl ammonium chloride
Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Isotridecanol, ethoxylated
Brief contact is essentially nonirritating to skin.

Ethoxylated branched C11-14, C13-rich alcohols
For similar material(s):
Prolonged contact may cause slight skin irritation with local redness.

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.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
For similar material(s):
May cause eye irritation.
May cause corneal injury.

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

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

Ethoxylated branched C11-14, C13-rich alcohols
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.

Sensitization

For skin sensitization:
Not classified based on available information.

For respiratory sensitization:
Not classified based on available information.

Information for the Product:

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Hexadecyltrimethyl ammonium chloride
For skin sensitization:

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

For respiratory sensitization:
No relevant data found.

Isotridecanol, ethoxylated
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
For similar material(s):
For skin sensitization:
Did not cause allergic skin reactions when tested in humans.

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.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
Available data are inadequate to determine single exposure specific target organ toxicity.

Hexadecyltrimethyl ammonium chloride
Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

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

Ethoxylated branched C11-14, C13-rich alcohols
Available data are inadequate to determine single exposure specific target organ toxicity.

Aspiration Hazard

Not classified based on available information.

Information for the Product:

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

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
Based on available information, aspiration hazard could not be determined.

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

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

Ethoxylated branched C11-14, C13-rich alcohols
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:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
No relevant data found.

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

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
No relevant data found.

Carcinogenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
No relevant data found.

Hexadecyltrimethyl ammonium chloride
No relevant data found.

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
No relevant data found.

Teratogenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
No relevant data found.

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

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
No relevant data found.

Reproductive toxicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
No relevant data found.

Hexadecyltrimethyl ammonium chloride
For similar material(s): In animal studies, did not interfere with reproduction.

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols

No relevant data found.

Mutagenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
No relevant data found.

Hexadecyltrimethyl ammonium chloride
For similar material(s): In vitro genetic toxicity studies were negative.

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
No relevant data found.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated

Acute toxicity to fish
No relevant data found.

Hexadecyltrimethyl ammonium chloride

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Danio rerio (zebra fish), 96 Hour, 0.19 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 0.012 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 0.113 mg/l, OECD Test Guideline 201 or Equivalent
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 0.068 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Pseudomonas putida, 16 Hour, Growth inhibition, 0.96 mg/l, DIN 38 412 Part 8

Chronic toxicity to fish
Based on data from similar materials
NOEC, Pimephales promelas (fathead minnow), 28 d, mortality, 0.0322 mg/l

Chronic toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 0.00415 mg/l

Isotridecanol, ethoxylated

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, Leuciscus idus (Golden orfe), 96 Hour, > 1 - 10 mg/l, DIN 38412

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, > 1 - 10 mg/l

Acute toxicity to algae/aquatic plants
EC50, 72 Hour, > 1 - 10 mg/l

Toxicity to bacteria
EC10, 17 Hour, > 2,500 mg/l, DIN 38 412 Part 8

Chronic toxicity to fish
NOEC, Fish, > 0.1 - 1 mg/l

Ethoxylated branched C11-14, C13-rich alcohols

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).
Based on data from similar materials
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 5.6 mg/l

Acute toxicity to aquatic invertebrates
Based on data from similar materials
EC50, Daphnia magna (Water flea), 48 Hour, > 1 - 10 mg/l

Acute toxicity to algae/aquatic plants
Based on data from similar materials
EC50, 96 Hour, > 1 - 10 mg/l

Chronic toxicity to fish
Based on data from similar materials
NOEC, Lepomis macrochirus (Bluegill sunfish), 30 d, > 0.33 mg/l

Chronic toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 21 d, 0.77 mg/l

Persistence and degradability

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated

Biodegradability: No relevant data found.

Hexadecyltrimethyl ammonium chloride

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Fail
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Isotridecanol, ethoxylated

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Ethoxylated branched C11-14, C13-rich alcohols

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Based on data from similar materials
Biodegradation: 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated

Bioaccumulation: No relevant data found.

Hexadecyltrimethyl ammonium chloride

Bioaccumulation: Based on data from similar materials Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.08 Estimated by Structure-Activity Relationship (SAR).
Bioconcentration factor (BCF): 33 - 160 Lepomis macrochirus (Bluegill sunfish)

Isotridecanol, ethoxylated

Bioaccumulation: No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 6.3 Estimated.
Bioconcentration factor (BCF): 283 Fish Estimated.

Mobility in Soil

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated

No relevant data found.

Hexadecyltrimethyl ammonium chloride
No relevant data found.

Isotridecanol, ethoxylated
No relevant data found.

Ethoxylated branched C11-14, C13-rich alcohols
Partition coefficient (Koc): 5649 Estimated.

Results of PBT and vPvB assessment

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Hexadecyltrimethyl ammonium chloride
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).

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

Ethoxylated branched C11-14, C13-rich alcohols
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects

Siloxanes and Silicones, di-Me, polymers with 3-[(2-aminoethyl)amino]propyl silsesquioxanes, hydroxy-terminated
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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

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

Ethoxylated branched C11-14, C13-rich alcohols
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: Recycler. Reclaimer. Incinerator or other thermal destruction device.

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

Emergency Decree on Controlling the Use of Volatile Substances B.E. 2533
Not applicable

Hazardous Substance Act B.E. 2535
This product may subject restriction or prohibition under below authorities due to certain applications. For details, please refer to local regulations to decide if any actions (of notification, registration, and/or license in accordance with the determined specific rules and procedure) are needed before business activity happen (production, import, export or to have it in possession for transport and/or storage).
Department of Agriculture
Not applicable

Department of Energy Business
Not applicable

Department of Livestock
Banned and/or restricted

Department of Industrial Works
Not applicable

Food and Drug Administration
Banned and/or restricted

Department of Fisheries
Not applicable

16. OTHER INFORMATION

Revision
Identification Number: 4117214 / A176 / Issue Date: 21.04.2022 / Version: 6.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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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