

SAFETY DATA SHEET

DOW CHEMICAL THAILAND LTD

Product name: DOWSIL™ BY 25-337 Issue Date: 03.04.2020 Print Date: 04.04.2020

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™ BY 25-337

Recommended use of the chemical and restrictions on use

Identified uses: Cosmetics

COMPANY IDENTIFICATION

DOW CHEMICAL THAILAND LTD 75 SOI SAENG CHAN-RUBIA SUKHUMVIT ROAD, PRAKANONG KLONG TOEY 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

Flammable liquids - Category 4

GHS label elements

Signal word: WARNING!

Hazard statements

Combustible liquid.

Precautionary statements

Prevention

Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

Keep only in original container.

Wear protective gloves/ eye protection/ face protection.

Response

In case of fire: Use alcohol-resistant foam, carbon dioxide or water mist for extinction.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

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

Other hazards

May generate flammable hydrogen gas. Avoid contact with water, alcohols, acidic, basic, or oxidizing materials.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Alkanes, C13-C16-iso-	68551-20-2	>= 36.0 - <= 44.0 %
Alkanes, C10-13-iso-	68551-17-7	>= 8.0 - <= 12.0 %

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: No emergency medical treatment necessary.

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

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

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

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Extinguishing media

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

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

Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides. Carbon oxides.

Unusual Fire and Explosion Hazards: Flash back possible over considerable distance.. Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket.. Exposure to combustion products may be a hazard to health.. 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. Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations.

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. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should bestored in a vented container. Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep container tightly closed. Keep away from water. Protect from moisture. 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 even after 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 in original container. 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. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Clogged container vents may increase pressure build up. Store in a closed container.

Do not store with the following product types: Strong oxidizing agents. Explosives. Gases. Unsuitable materials for containers: Do not store in or use containers except the original product package.

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.

Individual protection measures

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

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and

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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.

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state liquid Color yellow

Odor characteristic
Odor Threshold No data available
pH No data available
Melting point/range No data available
Freezing point No data available

Boiling point (760 mmHg) > 65 °C

Flash point Seta closed cup 84 °C

Evaporation Rate (Butyl Acetate

= 1)

No data available

Flammability (solid, gas)

Flammability (liquids)

Lower explosion limit

Upper explosion limit

Vapor Pressure

Relative Vapor Density (air = 1)

Not applicable

Not applicable

No data available

No data available

No data available

Relative Density (water = 1) 0.87

Water solubility

No data available

Partition coefficient: n
No data available

octanol/water

Auto-ignition temperature

Decomposition temperature

No data available

Oxidizing properties The substance or mixture is not classified as oxidizing.

Molecular weightNo data availableParticle sizeNot 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. Vapours may form explosive mixture with air. Product may evolve flammable hydrogen gas on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. Hazardous decomposition products will be formed at elevated temperatures. Combustible liquid.

Conditions to avoid: Heat, flames and sparks. Exposure to moisture

Incompatible materials: Oxidizing agents

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

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:

Alkanes, C13-C16-iso-

Based on data from similar materials LD50, Rat, > 5,000 mg/kg

Alkanes, C10-13-iso-

LD50, Rat, > 5,000 mg/kg

Acute dermal toxicity

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

As product: The dermal LD50 has not been determined.

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

Information for components:

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity

No adverse effects are anticipated from inhalation.

As product: The LC50 has not been determined.

Information for components:

Alkanes, C13-C16-iso-

Based on data from similar materials LC50, Rat, 4 Hour, dust/mist, > 5.3 mg/l

Alkanes, C10-13-iso-

LC50, Rat, 4 Hour, dust/mist, 5 mg/l

Skin corrosion/irritation

Based on information for component(s):

Brief contact may cause slight skin irritation with local redness.

May cause drying and flaking of the skin.

Information for components:

Alkanes, C13-C16-iso-

Based on data from similar materials

Brief contact is essentially nonirritating to skin.

Alkanes, C10-13-iso-

Brief contact may cause slight skin irritation with local redness.

May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Based on information for component(s):

Essentially nonirritating to eyes.

Information for components:

Alkanes, C13-C16-iso-

Based on data from similar materials May cause slight eye irritation. Corneal injury is unlikely.

Alkanes, C10-13-iso-

Essentially nonirritating to eyes.

Sensitization

For skin sensitization:

Based on information for component(s):

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

For respiratory sensitization:

No relevant data found.

Information for components:

Alkanes, C13-C16-iso-

For skin sensitization:

For similar material(s):

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

For respiratory sensitization:

No relevant data found.

Alkanes, C10-13-iso-

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

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Information for components:

Alkanes, C13-C16-iso-

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

Aspiration Hazard

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

Information for components:

Alkanes, C13-C16-iso-

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Alkanes, C10-13-iso-

May be fatal if swallowed and enters airways.

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on information for component(s):

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

Information for components:

Alkanes, C13-C16-iso-

For similar material(s):

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

Alkanes, C10-13-iso-

No relevant data found.

Carcinogenicity

No relevant data found.

Information for components:

Alkanes, C13-C16-iso-

For similar material(s): Did not cause cancer in laboratory animals.

Alkanes, C10-13-iso-

No relevant data found.

Teratogenicity

No relevant data found.

Information for components:

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

No relevant data found.

Reproductive toxicity

No relevant data found.

Information for components:

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

No relevant data found.

Mutagenicity

Based on information for component(s): In vitro genetic toxicity studies were negative.

Information for components:

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

No relevant data found.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Alkanes, C13-C16-iso-

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis

(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Based on data from similar materials

LL50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 1,000 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

Based on data from similar materials

EC50, Daphnia magna (Water flea), 48 Hour, > 1,000 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Based on data from similar materials

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 1,000 mg/l, OECD Test Guideline 201

Alkanes, C10-13-iso-

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). LL50, Rainbow trout (Oncorhynchus mykiss), > 1,000 mg/l

Acute toxicity to aquatic invertebrates

EL50, Daphnia magna (Water flea), 48 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants

Based on data from similar materials

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, 1,000 mg/l, OECD Test Guideline 201

Chronic toxicity to fish

NOELR, Rainbow trout (Oncorhynchus mykiss), 28 d, 0.103 mg/l

Chronic toxicity to aquatic invertebrates

For similar material(s):

NOELR, Daphnia magna, 21 d, 1 mg/l

Persistence and degradability

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

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:** 31 % **Exposure time:** 28 d

Method: OECD Test Guideline 301F

Bioaccumulative potential

Alkanes, C13-C16-iso-

Bioaccumulation: No relevant data found.

Alkanes, C10-13-iso-

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

Partition coefficient: n-octanol/water(log Pow): 5.85 estimated

Mobility in Soil

Alkanes, C13-C16-iso-

No relevant data found.

Alkanes, C10-13-iso-

No relevant data found.

Results of PBT and vPvB assessment

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

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

Other adverse effects

Alkanes, C13-C16-iso-

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

Alkanes, C10-13-iso-

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

Further information:

VENTED PACKAGES ARE FORBIDDEN FOR AIR 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

Department of Agriculture Not applicable

Department of Energy Business Not applicable

Department of Livestock Not applicable

Department of Industrial Works Not applicable

Food and Drug Administration Not applicable

Department of Fisheries Not applicable

16. OTHER INFORMATION

Revision

Identification Number: 4092605 / A176 / Issue Date: 03.04.2020 / Version: 2.0 Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx -Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG -Emergency Response Guide: GHS - Globally Harmonized System: GLP - Good Laboratory Practice: IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods: TSCA - Toxic Substances Control Act (United States): UN - United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

DOW CHEMICAL THAILAND LTD urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the

safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version. TH