



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** EcoSense™ GL-60 HA Surfactant

**Issue Date:** 03/14/2023

**Print Date:** 03/15/2023

THE DOW CHEMICAL COMPANY 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.

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## 1. IDENTIFICATION

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**Product name:** EcoSense™ GL-60 HA Surfactant

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Cosmetics ingredient.

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY  
2211 H.H. DOW WAY  
MIDLAND MI 48674  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Eye irritation - Category 2A

### Label elements

**Hazard pictograms**



Signal word: **WARNING!**

**Hazards**

Causes serious eye irritation.

**Precautionary statements****Prevention**

Wash skin thoroughly after handling.

Wear eye protection/ face protection.

**Response**

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

If eye irritation persists: Get medical advice/ attention.

**Other hazards**

Water Reactive

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a mixture.

| Component                                                                                                                        | CASRN         | Concentration       |
|----------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------|
| Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast Candida Bombicola | Not available | > 50.0 - <= 55.0 %  |
| Water                                                                                                                            | 7732-18-5     | >= 40.0 - <= 47.0 % |
| Glycerol                                                                                                                         | 56-81-5       | <= 2.0 %            |
| Sodium benzoate                                                                                                                  | 532-32-1      | <= 0.9 %            |

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**4. FIRST AID MEASURES**

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

**Most important symptoms and effects, both acute and delayed:**

Causes serious eye irritation.

**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.

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## 5. FIREFIGHTING MEASURES

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### Extinguishing media

**Suitable extinguishing media:** Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray.

**Unsuitable extinguishing media:** None known..

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** No data available

**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..

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..

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. 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:** 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.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. 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 in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.  
Unsuitable materials for containers: None known.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 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     |
|-----------------|----------------------------------------------------------------------------------------------------|----------------------------------|-----------|
| Glycerol        | OSHA Z-1                                                                                           | TWA mist, respirable fraction    | 5 mg/m3   |
|                 | OSHA Z-1                                                                                           | TWA mist, total dust             | 15 mg/m3  |
|                 | OSHA P0                                                                                            | TWA Mist - total dust            | 10 mg/m3  |
|                 | OSHA P0                                                                                            | TWA Mist - respirable fraction   | 5 mg/m3   |
| Sodium benzoate | ACGIH                                                                                              | TWA Inhalable particulate matter | 2.5 mg/m3 |
|                 | Further information: A5: Not suspected as a human carcinogen; Skin: Danger of cutaneous absorption |                                  |           |

### 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 chemical goggles.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile")

or "NBR"). 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

|                                        |                                                            |
|----------------------------------------|------------------------------------------------------------|
| Physical state                         | viscous liquid                                             |
| Color                                  | amber                                                      |
| Odor                                   | Mild aromatic                                              |
| Odor Threshold                         | No data available                                          |
| pH                                     | 4.5 - 5.5 0.1%                                             |
| Melting point/range                    | No data available                                          |
| Freezing point                         | No data available                                          |
| Boiling point (760 mmHg)               | No data available                                          |
| Flash point                            | > 300 °F ( > 300 °F)                                       |
| Evaporation Rate (Butyl Acetate = 1)   | No data available                                          |
| Flammability (solid, gas)              | Not Applicable                                             |
| Flammability (liquids)                 | Not expected to be a static-accumulating flammable liquid. |
| 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)           | 1.04 - 1.09                                                |
| Water solubility                       | partly soluble                                             |
| Partition coefficient: n-octanol/water | log Pow: 2.8 <i>estimated</i>                              |
| Auto-ignition temperature              | No data available                                          |
| Decomposition temperature              | No data available                                          |
| Kinematic Viscosity                    | No data available                                          |

|                             |                   |
|-----------------------------|-------------------|
| <b>Explosive properties</b> | No data available |
| <b>Oxidizing properties</b> | No data available |
| <b>Softening point</b>      | No data available |
| <b>Molecular weight</b>     | No data available |
| <b>Pour point</b>           | No data available |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**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**

No hazardous decomposition products are known.

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## 11. TOXICOLOGICAL INFORMATION

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

**Information on likely routes of exposure**

Ingestion, Inhalation, Skin contact, Eye contact. 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. 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:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

Single dose oral LD50 has not been determined.

**Glycerol**

Excessive exposure may cause: Central nervous system effects. Observations in humans include: Altered blood sugar levels. LD50, Rat, > 11,500 mg/kg

**Sodium benzoate**

LD50, Rat, male and female, 2,100 - 3,450 mg/kg Estimated.

**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, > 5,000 mg/kg Estimated.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

The dermal LD50 has not been determined.

**Glycerol**

LD50, Guinea pig, >= 56,750 mg/kg

**Sodium benzoate**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

**Information for the Product:**

No adverse effects expected from single exposure.

The LC50 has not been determined.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

The LC50 has not been determined.

**Glycerol**

LC50, Rat, 4 Hour, dust/mist, > 2.75 mg/l No deaths occurred following exposure to a saturated atmosphere.

**Sodium benzoate**

The LC50 has not been determined.

**Skin corrosion/irritation**

Not classified based on available information.

**Information for the Product:**

Brief contact may cause slight skin irritation with local redness.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

Brief contact may cause slight skin irritation with local redness.

**Glycerol**

Prolonged exposure not likely to cause significant skin irritation.

**Sodium benzoate**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Information for the Product:**

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

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

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

**Glycerol**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Sodium benzoate**

May cause severe eye irritation.  
Corneal injury is unlikely.

**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:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Glycerol**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Sodium benzoate**

Skin contact may cause an allergic skin reaction in a small proportion of individuals.

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:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

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

**Glycerol**

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

**Sodium benzoate**

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:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

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

**Glycerol**

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

**Sodium benzoate**

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

**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:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

No relevant data found.

**Glycerol**

Excessive exposure to glycerine may cause increased fat levels in blood.

**Sodium benzoate**

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

**Carcinogenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

No relevant data found.

**Glycerol**

Did not cause cancer in laboratory animals.

**Sodium benzoate**

No relevant data found.

**Teratogenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

No relevant data found.

**Glycerol**

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

**Sodium benzoate**

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

**Reproductive toxicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

No relevant data found.

**Glycerol**

Reproductive effects seen in female animals are believed to be due to altered nutritional states resulting from extremely high doses of glycerine given in the diet. Similar effects have been seen in animals fed synthetic diets.

**Sodium benzoate**

No relevant data found.

**Mutagenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

Sophorolipids: fermentation products of glucose and fatty acids, C18 (unsaturated), glycerol esters with yeast *Candida Bombicola*

No relevant data found.

**Glycerol**

In vitro genetic toxicity studies were negative.

**Sodium benzoate**

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

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**12. ECOLOGICAL INFORMATION**

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

**Toxicity****Acute toxicity to fish**

No relevant data found.

**Persistence and degradability**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 67 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F

**Bioaccumulative potential**

**Bioaccumulation:** Bioconcentration potential is low ( $BCF < 100$  or  $\log Pow < 3$ ).

**Partition coefficient: n-octanol/water(log Pow):** 2.8 estimated

**Mobility in soil**

No relevant data found.

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### 13. DISPOSAL CONSIDERATIONS

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**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 of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION 1: Identified Uses. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. Landfill.

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### 14. TRANSPORT INFORMATION

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**DOT**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Not regulated for transport

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.

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### 15. REGULATORY INFORMATION

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**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

Hazard not otherwise classified (physical hazards)

Serious eye damage or eye irritation

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania Worker and Community Right-To-Know Act:**

The following chemicals are listed because of the additional requirements of Pennsylvania law:

| Components | CASRN    |
|------------|----------|
| Oleic Acid | 112-80-1 |
| Glycerol   | 56-81-5  |

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**United States TSCA Inventory (TSCA)**

The product is used in a food, drug or cosmetic application and is subject to the applicable regulation. The product may only be used in the exempt application.

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**16. OTHER INFORMATION**

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**Hazard Rating System****NFPA**

| Health | Flammability | Instability |
|--------|--------------|-------------|
| 3      | 1            | 0           |

**Revision**

Identification Number: 99197515 / A001 / Issue Date: 03/14/2023 / Version: 6.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

|          |                                                                                  |
|----------|----------------------------------------------------------------------------------|
| ACGIH    | USA. ACGIH Threshold Limit Values (TLV)                                          |
| OSHA P0  | USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)               |
| OSHA Z-1 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| TWA      | 8-hour, time-weighted average                                                    |

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

#### **Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY 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.

US