



# SAFETY DATA SHEET

DOW FRANCE S.A.S.

Safety Data Sheet according to Reg. (EU) 2020/878

**Product name: DOWSIL™ DS-1000 Aqueous Silicone Cleaner**

**Revision Date: 21.09.2022**

**Version: 4.0**

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DOW FRANCE S.A.S. 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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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1 Product identifier

**Product name:** DOWSIL™ DS-1000 Aqueous Silicone Cleaner

**UFI:** 6JW8-U0N6-300R-AM2D

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses:** Cleaning/washing agents and additives

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

DOW FRANCE S.A.S.

23 AVENUE JULES RIMET

93210 LA PLAINE SAINT-DENIS

FRANCE

**Customer Information Number:**

(31) 115 67 2626

SDSQuestion@dow.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 00 33 388 736 000

**Local Emergency Contact:** 00 33 388 736 000

**ORFILA:** + 33 (0)1 45 42 59 59

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008:

Skin corrosion - Category 1 - H314

Serious eye damage - Category 1 - H318

Long-term (chronic) aquatic hazard - Category 3 - H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

### Hazard pictograms



Signal word: **DANGER**

### Hazard statements

- H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

### Precautionary statements

- P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.  
P301 + P330 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
+ P331  
P303 + P361 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
+ P353  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
+ P310 Immediately call a POISON CENTER and/or doctor.  
P305 + P351 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  
+ P338 +  
P310 and/or doctor.

**Contains** Alcohols, C6-12, ethoxylated; Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

## 2.3 Other hazards

This product contains no substances assessed to be PBT or vPvB at levels of 0.1% or higher.

### Endocrine disrupting properties

Environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Human Health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Inorganic and organic compounds, Mixture  
**3.2 Mixtures**

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
<b>CASRN</b> 68439-45-2 <b>EC-No.</b> Not available <b>Index-No.</b> -	-	>= 2,3 - <= 3,1 %	Alcohols, C6-12, ethoxylated	Acute Tox. 4; H302 Eye Dam. 1; H318  Acute toxicity estimate Acute oral toxicity: 500 mg/kg Acute dermal toxicity: > 2 000 mg/kg
<b>CASRN</b> 107-98-2 <b>EC-No.</b> 203-539-1 <b>Index-No.</b> 603-064-00-3	01-2119457435-35	>= 2,0 - <= 2,8 %	1-methoxy-2- propanol	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)  Acute toxicity estimate Acute oral toxicity: 3 739 mg/kg 4 277 mg/kg Acute inhalation toxicity: 30,02 mg/l, 4 Hour, vapour Acute dermal toxicity: > 2 000 mg/kg
<b>CASRN</b> 68424-85-1 <b>EC-No.</b> 270-325-2 <b>Index-No.</b> -	-	>= 0,9 - <= 1,3 %	Quaternary ammonium compounds, benzyl-C12-16- alkyldimethyl, chlorides	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1  Acute toxicity estimate Acute oral toxicity: 426 mg/kg Acute dermal toxicity: 3 412 mg/kg
Substances with a workplace exposure limit				
<b>CASRN</b> 34590-94-8 <b>EC-No.</b> 252-104-2 <b>Index-No.</b> -	01-2119450011-60	>= 4,0 - <= 5,0 %	Dipropylene glycol monomethyl ether	Not classified  Acute toxicity estimate Acute oral toxicity: > 5 000 mg/kg Acute inhalation toxicity:

				3,35 mg/l, 7 Hour, vapour Acute dermal toxicity: 9 510 mg/kg
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For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: FIRST AID MEASURES

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

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

### 4.2 Most important symptoms and effects, both acute and delayed:

Causes serious eye damage. Causes severe burns.

### 4.3 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. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns and/or ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal or esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Extinguishing media

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

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

### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** Carbon oxides. Nitrogen oxides (NOx). Chlorine compounds.

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health..

### 5.3 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..

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**6.2 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.

**6.3 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.

**6.4 Reference to other sections:**

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** Do not get on skin or clothing. Do not breathe vapours or spray mist. Do not swallow. Do not get in eyes. Keep container tightly closed. 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.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.

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

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 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
1-methoxy-2-propanol	ACGIH	TWA	50 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	100 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	2000/39/EC	TWA	375 mg/m3 100 ppm
	Further information: skin: Identifies the possibility of significant uptake through the skin; Indicative		
	2000/39/EC	STEL	568 mg/m3 150 ppm
	Further information: skin: Identifies the possibility of significant uptake through the skin; Indicative		
	FR VLE	VME	188 mg/m3 50 ppm
	Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits		
	FR VLE	VLCT (VLE)	375 mg/m3 100 ppm
	Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits		
Dipropylene glycol monomethyl ether	ACGIH	TWA	50 ppm
	Dow IHG	TWA	10 ppm
	Dow IHG	STEL	30 ppm
	2000/39/EC	TWA	308 mg/m3 50 ppm
	Further information: skin: Identifies the possibility of significant uptake through the skin; Indicative		
	FR VLE	VME	308 mg/m3 50 ppm
	Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits		

### Recommended monitoring procedures

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy); European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of

exposure to chemical and biological agents); European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods.  
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.  
Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.

L'Institut National de Recherche et de Sécurité, (INRS), France.

### Derived No Effect Level

1-methoxy-2-propanol

#### Workers

<i>Acute systemic effects</i>		<i>Acute local effects</i>		<i>Long-term systemic effects</i>		<i>Long-term local effects</i>	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	553,5 mg/m <sup>3</sup>	50,6 mg/kg bw/day	369 mg/m <sup>3</sup>	n.a.	n.a.

#### Consumers

<i>Acute systemic effects</i>			<i>Acute local effects</i>		<i>Long-term systemic effects</i>			<i>Long-term local effects</i>	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	18,1 mg/kg bw/day	43,9 mg/m <sup>3</sup>	3,3 mg/kg bw/day	n.a.	n.a.

Dipropylene glycol monomethyl ether

#### Workers

<i>Acute systemic effects</i>		<i>Acute local effects</i>		<i>Long-term systemic effects</i>		<i>Long-term local effects</i>	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	283 mg/kg bw/day	308 mg/m <sup>3</sup>	n.a.	n.a.

#### Consumers

<i>Acute systemic effects</i>			<i>Acute local effects</i>		<i>Long-term systemic effects</i>			<i>Long-term local effects</i>	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	121 mg/kg bw/day	37,2 mg/m <sup>3</sup>	36 mg/kg bw/day	n.a.	n.a.

### Predicted No Effect Concentration

1-methoxy-2-propanol

Compartment	PNEC
Fresh water	10 mg/l

Marine water	1 mg/l
Intermittent use/release	100 mg/l
Sewage treatment plant	100 mg/l
Fresh water sediment	52,3 mg/kg
Marine sediment	5,2 mg/kg
Soil	5,49 mg/kg

Dipropylene glycol monomethyl ether

Compartment	PNEC
Fresh water	19 mg/l
Marine water	1,9 mg/l
Intermittent use/release	190 mg/l
Sewage treatment plant	4168 mg/l
Fresh water sediment	70,2 mg/kg dry weight (d.w.)
Marine sediment	7,02 mg/kg dry weight (d.w.)
Soil	2,74 mg/kg dry weight (d.w.)

## 8.2 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. Chemical goggles should be consistent with EN 166 or equivalent.

#### Skin protection

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. 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. In misty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Color	light yellow
Odor	characteristic
Odor Threshold	No data available
pH	13
Melting point/freezing point	
Melting point/range	No data available
Freezing point	not determined
Boiling point or initial boiling point and boiling range	
Boiling point (760 mmHg)	> 35 °C
Flash point	<b>closed cup</b> >100 °C
Flammability (solid, gas)	Not applicable
Flammability (liquids)	not determined
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)	1,05
Solubility(ies)	
Water solubility	not determined
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	> 450 °C
Decomposition temperature	No data available
Kinematic Viscosity	No data available
Particle characteristics	
Particle size	Not applicable

**9.2 Other information**

<b>Molecular weight</b>	No data available
<b>Dynamic Viscosity</b>	150 mPa.s
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Self-heating substances</b>	The substance or mixture is not classified as self heating.
<b>Metal corrosion rate</b>	Not corrosive to metals

**Evaporation Rate (Butyl Acetate = 1)** No data available

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

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**SECTION 10: STABILITY AND REACTIVITY**

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**10.1 Reactivity:** Not classified as a reactivity hazard.

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** Can react with strong oxidizing agents.

**10.4 Conditions to avoid:** None known.

**10.5 Incompatible materials:** Avoid contact with oxidizing materials. Acids

**10.6 Hazardous decomposition products:**  
Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****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:****Acute oral toxicity****Information for the Product:**

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

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):  
LD50, Rat, > 5 000 mg/kg Estimated.

#### Information for components:

##### **Alcohols, C6-12, ethoxylated**

Acute toxicity estimate, 500 mg/kg Expert judgement

##### **1-methoxy-2-propanol**

LD50, Rat, male, 3 739 mg/kg OECD 401 or equivalent

LD50, Rat, female, 4 277 mg/kg OECD 401 or equivalent

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

LD50, Rat, 426 mg/kg

##### **Dipropylene glycol monomethyl ether**

LD50, Rat, > 5 000 mg/kg OECD Test Guideline 401

#### Acute dermal toxicity

##### Information for the Product:

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

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:

##### **Alcohols, C6-12, ethoxylated**

LD50, Rat, > 2 000 mg/kg OECD Test Guideline 402

##### **1-methoxy-2-propanol**

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

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

LD50, Rabbit, 3 412 mg/kg

##### **Dipropylene glycol monomethyl ether**

LD50, Rabbit, 9 510 mg/kg OECD Test Guideline 402

#### Acute inhalation toxicity

##### Information for the Product:

Vapors are primarily water; single exposure is not likely to be hazardous. Mist may cause irritation of upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

#### Information for components:

##### **Alcohols, C6-12, ethoxylated**

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Vapor from heated material or mist may cause respiratory irritation.

The LC50 has not been determined.

##### **1-methoxy-2-propanol**

LC50, Rat, male and female, 4 Hour, vapour, 30,02 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

The LC50 has not been determined.

##### **Dipropylene glycol monomethyl ether**

LC50, Rat, 7 Hour, vapour, 3,35 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.

#### Skin corrosion/irritation

Causes severe burns.

##### Information for the Product:

Based on information for component(s):

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

##### Information for components:

##### **Alcohols, C6-12, ethoxylated**

Brief contact may cause skin irritation with local redness.

##### **1-methoxy-2-propanol**

Brief contact is essentially nonirritating to skin.

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

##### **Dipropylene glycol monomethyl ether**

Prolonged exposure not likely to cause significant skin irritation.

**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:****Alcohols, C6-12, ethoxylated**

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

**1-methoxy-2-propanol**

May cause slight eye irritation.

May cause slight temporary corneal injury.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

May cause slight temporary eye irritation.

Corneal injury is unlikely.

**Sensitization****Information for the Product:**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Information for components:****Alcohols, C6-12, ethoxylated**

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

For respiratory sensitization:

No relevant data found.

**1-methoxy-2-propanol**

For skin sensitization:

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

For respiratory sensitization:

No relevant data found.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

For respiratory sensitization:

No relevant data found.

**Dipropylene glycol monomethyl ether**

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

**Information for the Product:**

Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

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

**1-methoxy-2-propanol**

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

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

**Aspiration Hazard**

**Information for the Product:**

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

**Information for components:**

**Alcohols, C6-12, ethoxylated**

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

**1-methoxy-2-propanol**

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

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

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)**

**Information for the Product:**

Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

No relevant data found.

**1-methoxy-2-propanol**

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

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

Liver.

Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

Gastrointestinal tract.

**Dipropylene glycol monomethyl ether**

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

**Carcinogenicity**

**Information for the Product:**

Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

No relevant data found.

**1-methoxy-2-propanol**

Did not cause cancer in laboratory animals.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

No relevant data found.

**Dipropylene glycol monomethyl ether**

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

### Teratogenicity

**Information for the Product:**

Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

No relevant data found.

**1-methoxy-2-propanol**

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

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

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

### Reproductive toxicity

**Information for the Product:**

Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

No relevant data found.

**1-methoxy-2-propanol**

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

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

In animal studies, did not interfere with reproduction.

**Dipropylene glycol monomethyl ether**

For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

### Mutagenicity

**Information for the Product:**



Product test data not available.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

No relevant data found.

**1-methoxy-2-propanol**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

In vitro genetic toxicity studies were negative.

**Dipropylene glycol monomethyl ether**

In vitro genetic toxicity studies were negative.

**11.2 Information on other hazards**

**Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Information for components:**

**Alcohols, C6-12, ethoxylated**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**1-methoxy-2-propanol**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Dipropylene glycol monomethyl ether**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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

**12.1 Toxicity**

**Alcohols, C6-12, ethoxylated****Acute toxicity to fish**

Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

LC50, 96 Hour, > 10 - 100 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, 72 Hour, > 10 - 100 mg/l

**1-methoxy-2-propanol****Acute toxicity to fish**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Leuciscus idus (Golden orfe), static test, 96 Hour, 6 812 mg/l, DIN 38412

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, >= 1 000 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 20 800 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 21 100 - 25 900 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 7 d, Growth rate inhibition, > 1 000 mg/l, OECD Test Guideline 201 or Equivalent

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides****Acute toxicity to fish**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50, Pimephales promelas (fathead minnow), 96 Hour, 0,28 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 0,016 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Algae, 96 Hour, 0,049 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, 3 Hour, 7,75 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**

NOEC, Pimephales promelas (fathead minnow), 34 d, 0,032 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, 0,0042 mg/l

**Dipropylene glycol monomethyl ether****Acute toxicity to fish**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Poecilia reticulata (guppy), static test, 96 Hour, > 1 000 mg/l, OECD Test Guideline 203 or Equivalent

#### **Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 1 919 mg/l, OECD Test Guideline 202 or Equivalent

LC50, Crangon crangon (shrimp), semi-static test, 96 Hour, > 1 000 mg/l, OECD Test Guideline 202 or Equivalent

LC50, copepod Acartia tonsa, static test, 48 Hour, 2 070 mg/l, ISO TC147/SC5/WG2

#### **Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Biomass, > 969 mg/l, OECD Test Guideline 201 or Equivalent

#### **Toxicity to bacteria**

EC10, Pseudomonas putida, 18 Hour, 4 168 mg/l

#### **Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), flow-through test, 22 d, > 0,5 mg/l

LOEC, Daphnia magna (Water flea), flow-through test, 22 d, > 0,5 mg/l

MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), flow-through test, 22 d, > 0,5 mg/l

## **12.2 Persistence and degradability**

### **Alcohols, C6-12, ethoxylated**

**Biodegradability:**

**Biodegradation:** 74 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D

### **1-methoxy-2-propanol**

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

10-day Window: Pass

**Biodegradation:** 96 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301E or Equivalent

### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

**Biodegradability:** Material is expected to be readily biodegradable.

10-day Window: Pass

**Biodegradation:** > 95,5 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

**Biodegradation:** > 99 %

**Exposure time:** 7 d

**Method:** OECD Test Guideline 302A or Equivalent

**Biodegradation:** > 90 %

**Method:** OECD Test Guideline 303A or Equivalent

**Dipropylene glycol monomethyl ether**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material has inherent, ultimate biodegradability according to OECD test (s) guidelines (reaches > 60 or 70% biodegradation in OECD test(s).

10-day Window: Pass

**Biodegradation:** 75 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

### 12.3 Bioaccumulative potential

**Alcohols, C6-12, ethoxylated**

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

**Partition coefficient: n-octanol/water(log Pow):** Pow: 3,77 - 5,36

**Bioconcentration factor (BCF):** 4 Fish Estimated.

**1-methoxy-2-propanol**

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

**Partition coefficient: n-octanol/water(log Pow):** 0,37 at 20 °C Measured

**Bioconcentration factor (BCF):** < 2

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Bioconcentration factor (BCF):** 33,3 Lepomis macrochirus (Bluegill sunfish) 60 d Measured

**Dipropylene glycol monomethyl ether**

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

**Partition coefficient: n-octanol/water(log Pow):** 0,006 Measured

### 12.4 Mobility in soil

**Alcohols, C6-12, ethoxylated**

**Partition coefficient (Koc):** 13 Estimated.

**1-methoxy-2-propanol**

**Partition coefficient (Koc):** 0,2 - 1,0 Estimated.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

No relevant data found.

**Dipropylene glycol monomethyl ether**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

**Partition coefficient (Koc):** 0,28 Estimated.

### 12.5 Results of PBT and vPvB assessment

**Alcohols, C6-12, ethoxylated**

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

**1-methoxy-2-propanol**

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).

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

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).

**12.6 Endocrine disrupting properties** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Alcohols, C6-12, ethoxylated**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**1-methoxy-2-propanol**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Dipropylene glycol monomethyl ether**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**12.7 Other adverse effects****Alcohols, C6-12, ethoxylated**

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

**1-methoxy-2-propanol**

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

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**

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

**Dipropylene glycol monomethyl ether**

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

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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**SECTION 14: TRANSPORT INFORMATION**

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**Classification for ROAD and Rail transport (ADR/RID):**

- |                                   |   |
|-----------------------------------|---|
| 14.1 UN number or ID number       | UN 3267   |
| 14.2 UN proper shipping name      | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides) |
| 14.3 Transport hazard class(es)   | 8   |
| 14.4 Packing group                | II  |
| 14.5 Environmental hazards        | Not considered environmentally hazardous based on available data.   |
| 14.6 Special precautions for user | Hazard Identification Number: 80  |

**Classification for INLAND waterways (ADNR/ADN):**

Consult your Dow contact before transporting by inland waterway

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

- |  |   |
|--|---|
| 14.1 UN number or ID number                                  | UN 3267   |
| 14.2 UN proper shipping name                                 | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides) |
| 14.3 Transport hazard class(es)                              | 8   |
| 14.4 Packing group   | II  |
| 14.5 Environmental hazards                                   | Not considered as marine pollutant based on available data.   |
| 14.6 Special precautions for user                            | EmS: F-A, S-B   |
| 14.7 Maritime transport in bulk according to IMO instruments | Consult IMO regulations before transporting ocean bulk  |

**Classification for AIR transport (IATA/ICAO):**

- |                              |  |
|------------------------------|--|
| 14.1 UN number or ID number  | UN 3267  |
| 14.2 UN proper shipping name | Corrosive liquid, basic, organic, n.o.s.(Quaternary ammonium |

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	compounds, benzyl-C12-16-alkyldimethyl, chlorides)
<b>14.3 Transport hazard class(es)</b>	8
<b>14.4 Packing group</b>	II
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	No data available.

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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## SECTION 15: REGULATORY INFORMATION

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### REACH Regulation (EC) No 1907/2006

This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

#### REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:  
Number on list 3

#### Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: Not applicable

#### Installations classified for the protection of the environment (Environment Code R511-9)

not determined

#### Occupational Illnesses (R-461-3, France):

(Not applicable)

#### Further information

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture.

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## SECTION 16: OTHER INFORMATION

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### Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Skin Corr. - 1 - H314 - Based on product data or assessment

Eye Dam. - 1 - H318 - Based on product data or assessment

Aquatic Chronic - 3 - H412 - Calculation method

### Revision

Identification Number: 4095281 / A560 / Issue Date: 21.09.2022 / Version: 4.0

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

### Legend

2000/39/EC	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
FR VLE	France. Occupational Exposure Limits
STEL	Short term exposure limit
TWA	Time weighted average
VLCT (VLE)	Short Term Exposure Limit
VME	Time Weighted Average
Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure



**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; 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.

DOW FRANCE S.A.S. 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.

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