



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
JIS Z 7252:2019

Issuing Date 16-Nov-2021

Revision Date 25-Jan-2024

Revision Number 2.3

## 1. Identification

**Product Name** Methanol

**Synonyms** Methyl alcohol, wood alcohol, methyl hydroxide

**CAS No** 67-56-1

**Molecular weight** 32.04

**Registration Number(s)** No information available

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

#### **Supplier**

Methanex Japan Ltd  
Tokyo Toranomon Hills Mori Tower  
18th Floor 1-23-1 Toranomon  
Minato-ku Tokyo 105-6318  
Japan  
Telephone: +81 3 6807 3920  
Fax: +81 3 6807 3921

**Emergency telephone number** +81 3 4578 9341  
NCEC: 0120 015 230

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

**Recommended use** Industrial use  
Professional use  
Consumer use  
Solvent  
Fuels  
Raw material  
Cleaning agent  
Laboratory reagent  
Consumer use of cleaning agents and de-icers

**Restrictions on use** None

## 2. Hazard(s) identification

### GHS Classification

Flammable liquids	Category 2
Aspiration hazard	Classification not possible
Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Not classified
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Category 2A

Respiratory sensitization	Classification not possible
Germ cell mutagenicity	Not classified
Carcinogenicity	Classification not possible
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 1 Category 3
Category 1 Central nervous system, visual organs, Systemic Toxicity.	
Category 3 Target organ effects: Narcotic effects.	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 Central nervous system, visual organs.	
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified
Ozone	Classification not possible

**GHS label elements****Signal word**

Danger

**Hazard statements**

- Toxic if swallowed
  - Toxic in contact with skin
  - Toxic if inhaled
  - Causes serious eye irritation
  - May damage fertility or the unborn child
  - May cause drowsiness or dizziness
  - Causes damage to organs
  - Causes damage to organs through prolonged or repeated exposure
  - Highly flammable liquid and vapor
- Causes damage to the following organs: Central nervous system, visual organs, Systemic Toxicity.
- Causes damage to the following organs through prolonged or repeated exposure: Central nervous system, visual organs.

**Precautionary statements****Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Wear protective gloves/clothing and eye/face protection
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Ground and bond container and receiving equipment
- Use non-sparking tools
- Take action to prevent static discharges
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Use explosion-proof electrical/ ventilating/ lighting/ equipment
- Keep cool

**Response**

- Specific treatment (see supplemental first aid instructions on this label)
- IF exposed or concerned: Get medical advice/attention
- 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

- IF SWALLOWED: Immediately call a POISON CENTER or doctor
- Rinse mouth
- IF ON SKIN: Wash with plenty of water and soap
- Call a POISON CENTER or doctor if you feel unwell
- Take off immediately all contaminated clothing and wash it before reuse
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- Call a POISON CENTER or doctor
- In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Storage**

- Store locked up
- Store in a well-ventilated place. Keep container tightly closed

**Disposal**

- Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards**

- Poison
- Risk of blindness after swallowing the product

**3. Composition/information on ingredients**

**Pure substance/mixture**                      Substance

**CAS No**                                              67-56-1

Chemical name	CAS No.	Weight-%	ENCS Inventory	ENCS Number	ISHL Inventory	ISHL No.
Methanol	67-56-1	100	Existing	(2)-201	Existing	(2)-201

**Pollutant Release and Transfer Register (PRTR)**

Not applicable.

**Industrial Safety and Health Law**ISHL Notifiable Substances

Article 57-2 of the ISHL, Article 18-2, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

Harmful substances requiring risk assessment

Article 57-3 of the ISHL

Chemical name	Ministerial Ordinance Name	CAS No.	Content rate %	Implementation date
Methanol	Methanol	67-56-1	90 - 100	

Harmful Substances Whose Names Are to be Indicated on the Label

Article 57-1 of ISHL, Article 18, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

Chemical name	Ministerial Ordinance Name	CAS No.	Content rate %	Implementation date
Methanol	Methanol	67-56-1	90 - 100	

**Poisonous and Deleterious Substances Control Law**

Deleterious

**4. First-aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

<b>In case of inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If breathing has stopped, give artificial respiration. Get medical attention immediately. Immediate medical attention is required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen.
<b>In case of skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>In case of ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Ingestion causes nausea, weakness and central nervous system effects, headache, vomiting, dizziness, symptoms of drunkenness. Coma and death due to respiratory failure may follow severe exposures: Medical treatment necessary. A latent period of several hours may occur between exposure and the onset of symptoms. May cause redness and tearing of the eyes. May cause blindness.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not breathe vapor or mist.
<b>Note to physicians</b>	Poison. May be fatal if swallowed. The severity of outcome following methanol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested; therefore, there is a need for rapid treatment of any ingestion exposure. Call a Poison Center. Antidote: Fomepizole enhances elimination of metabolic formic acid. Antidote should be administered by qualified medical personnel.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use water spray to cool fire-exposed containers. Water will not cool methanol below its flash point. Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Do not use straight streams. Do not use a solid water stream as it may scatter and spread fire.
<b>Specific hazards arising from the chemical</b>	Highly flammable liquid and vapor. Vapors are heavier than air and may spread along floors. Mixtures >20% methanol with water: flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Hazardous combustion products</b> <b>Explosive properties</b>	Toxic gases or vapors, Carbon monoxide, Carbon dioxide (CO <sub>2</sub> ), Formaldehyde. Vapors may form explosive mixtures with air.
<b>Special Extinguishing Media</b>	None known based on information supplied.
<b>Special protective equipment and precautions for fire-fighters</b>	Methanol: Burns with invisible flame. Flame may not be visible in daylight. Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions

to control or extinguish the fire. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Do not breathe vapor or mist.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.
<b>Environmental precautions</b>	Avoid release to the environment. Dispose of contents/containers in accordance with local regulations. Biodegradable at low concentrations. Soluble in water. When released, this product is expected to evaporate. Contact authorities in the event of pollution of soil and aquatic environment or discharge into drains. Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
<b>Methods for containment</b>	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
<b>Other information</b>	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

## 7. Handling and storage

### Handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Do not enter confined area unless adequately ventilated. Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Do not breathe vapor or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation.
<b>Hygiene Measures</b>	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe vapor or mist.

### Storage

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up.

**8. Exposure controls/personal protection****Engineering controls**

Provide local exhaust ventilation. Handle product only in closed system or provide appropriate exhaust ventilation. All equipment used when handling the product must be grounded.

**Exposure guidelines**

Chemical name	Japan Society of Occupational Health	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Methanol 67-56-1	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> Sk*	200 ppm	TWA: 200 ppm STEL: 250 ppm Sk*

**Biological monitoring indicator**

Chemical name	Japan Society of Occupational Health	ACGIH
Methanol 67-56-1	20 mg/L - urine (Methanol) - end of shift	15 mg/L - urine (Methanol) - end of shift

**Environmental exposure controls**

Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste. Local authorities should be advised if significant spillages cannot be contained.

**Personal protective equipment****Respiratory protection**

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode. Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Eye/face protection**

Tight sealing safety goggles.

**Hand protection**

Wear suitable gloves. Impervious gloves.

**Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

Appearance	Clear liquid
Physical state	Liquid
Color	Clear
Odor	Alcohol
Odor threshold	4.2 -5960 ppm

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	-97.78 °C / -144 °F	No data available
Initial boiling point and boiling range	64.72 °C / 148.5 °F	No data available
Flammability		No data available
Upper/lower flammability or explosive limits		No data available
Upper flammability or explosive limits	36.5%	No data available
Lower flammability or explosive limits	5.5%	No data available
Flash point	11 °C / 51.8 °F	No data available
Evaporation rate	4.1	Butyl acetate = 1
Autoignition temperature	464 °C / 867.2 °F	No data available
Decomposition temperature		No data available
pH		No data available
Viscosity		
Kinematic viscosity		No data available
Dynamic viscosity	0.8 cP	@ 20 °C
Water solubility	Miscible in water	No data available
Solubility(ies)		No data available
Partition Coefficient (n-octanol/water)	-0.77	log Pow
Vapor pressure	12.8 kPa	@ 20 °C
Density and/or relative density		
Relative density	0.791 - 0.793	@20°C
Liquid Density		No data available
Bulk density		No data available
Relative vapor density	1.1	@ 20 °C (air = 1)
Particle characteristics		
Particle Size		Not applicable
Particle Size Distribution		Not applicable

**Other information**

Explosive properties	Vapors may form explosive mixtures with air
Oxidizing properties	None known
Molecular weight	32.04
VOC content	100%

**10. Stability and reactivity**

Reactivity	Containers may rupture or explode if exposed to heat.
Chemical stability	Stable under normal conditions. May form flammable/explosive vapor-air mixture. Hygroscopic.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Protect from direct sunlight. Containers may rupture or explode if exposed to heat. Heat, flames and sparks. Excessive heat.
Incompatible materials	Lead, Aluminum, Zinc, Oxidizing agent, Strong acids, Strong bases, Polyethylene, Polyvinyl chloride (PVC), Nitriles.
Hazardous decomposition products	Carbon monoxide, Carbon dioxide (CO2), Formaldehyde.
Hazardous polymerization	Hazardous polymerization does not occur.

**Explosion data****Sensitivity to static discharge** Yes.**Sensitivity to mechanical impact** None.**11. Toxicological information****Acute toxicity****Numerical measures of toxicity - Product Information**

Acute Toxicity Estimate (ATE) values provided as a reflection of the hazard classification. The acute toxicity of methanol varies greatly species to species and has been well documented. Methanol's toxicity is driven by its metabolism and the creation of toxic metabolites. Metabolism within animal species utilized for acute toxicity testing is not an accurate representation of human metabolism. Therefore, positive human evidence outweighs rat and rabbit toxicity values. Animal toxicity values are reported below, but are not appropriate for human health hazard classification.

The following values are calculated based on chapter 3.1 of the GHS document:

ATE (oral) 100 mg/kg  
 ATE (dermal) 300 mg/kg  
 ATE (inhalation-vapor) 3 mg/l

**Numerical measures of toxicity - Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methanol	= 6200 mg/kg ( Rat )	= 15840 mg/kg ( Rabbit )	= 22500 ppm ( Rat ) 8 h = 64000 ppm ( Rat ) 4 h

**Abbreviations and acronyms***Rat**Rabbit***Symptoms**

Ingestion causes nausea, weakness and central nervous system effects, headache, vomiting, dizziness, symptoms of drunkenness. Coma and death due to respiratory failure may follow severe exposures: Medical treatment necessary. A latent period of several hours may occur between exposure and the onset of symptoms. May cause redness and tearing of the eyes. May cause blindness.

**Product Information**

**Ingestion** Poison. Toxic if swallowed. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED.

**Inhalation** Toxic by inhalation. May cause drowsiness or dizziness.

**Skin contact** Toxic in contact with skin.

**Eye contact** Causes serious eye irritation.

**Skin corrosion/irritation** Classification not possible.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitization** Classification not possible.

**Germ cell mutagenicity** Classification not possible.

**Carcinogenicity** EU CLP: Category 2 (Applies to CLP according to Article 5 of Notification 2018-24). Based on available data, the classification criteria are not met.



**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**Target organ effects** Eyes: Optic nerve, Central nervous system.

**STOT - single exposure** Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed. Causes damage to organs in contact with skin. May cause drowsiness or dizziness.

Central nervous system, visual organs, Systemic Toxicity.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

Central nervous system, visual organs.

**Aspiration hazard** Classification not possible.

## 12. Ecological information

**Ecotoxicity** Avoid release to the environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Methanol - 67-56-1	-	LC50: =28200mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas) LC50: 19500 - 20700mg/L (96h, Oncorhynchus mykiss) LC50: 18 - 20mL/L (96h, Oncorhynchus mykiss) LC50: 13500 - 17600mg/L (96h, Lepomis macrochirus)	-

**Persistence and degradability** Readily biodegradable.

**Bioaccumulation** BCF <10.

### Component Information

Chemical name	Partition coefficient
Methanol 67-56-1	-0.77

**Mobility in soil** Adsorbs on soil.

**Hazardous to the ozone layer** Based on available data, the classification criteria are not met. Classification not possible.

**Other adverse effects** No information available.

## 13. Disposal considerations

**Waste from residues/unused products** Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Recover or recycle if possible. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

## 14. Transport information

### International Regulations

#### IMDG

UN number or ID number	UN1230
UN proper shipping name	METHANOL
Description	UN1230, METHANOL, 3 (6.1), II, (11°C C.C.)
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II
Marine pollutant	NP
EmS-No.	F-E, S-D
Special Provisions	279

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
IBC Code: Category Y

#### ADR

UN number or ID number	UN1230
UN proper shipping name	METHANOL
Description	UN1230, METHANOL, 3 (6.1), II
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II
ERG Code	3L
Special Provisions	279

#### IATA

UN number or ID number	UN1230
UN proper shipping name	Methanol
Description	UN1230, Methanol, 3 (6.1), II
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II
Special Provisions	A113
ERG Code	3L

### Domestic regulations

See section 15. If product is subject to the Fire Service Law, Poisonous and Deleterious Substance Control Law, High Pressure Gas Safety Law, Ship Safety Law, and/or the Civil Aeronautics Act, the requirements that are specific to each of the laws must be followed.

#### Japan

UN number or ID number	UN1230
UN proper shipping name	METHANOL
Description	UN1230, METHANOL, 3 (6.1), II
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II

## 15. Regulatory information

**National regulations****Pollutant Release and Transfer Register (PRTR)**

Not applicable

**Industrial Safety and Health Law****Harmful Substances Requiring Workers to Subject to Medical Exams**

Medical Examination - Industrial Safety and Health Law article 66, enforcement order article 22, and the Ordinance on Prevention of Hazards Due to Specified Chemical Substances, Table 5

**Ordinance on Prevention of Organic Solvent Poisoning**

Organic solvents class 2 - Industrial Safety and Health Law enforcement order Table 6-2 (related to article 6, article 21, article 22, and the Ordinance on Prevention of Organic Solvent Poisoning)

**Dangerous Substances**

Industrial Safety and Health Law enforcement order Table 1 (related to article 6 and article 9-3)

Flammable substance

**Harmful Substances Whose Names Are to be Indicated on the Label**

Article 57-1 of ISHL, Article 18, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

**ISHL Notifiable Substances**

Article 57-2 of the ISHL, Article 18-2, Item 1, Item 2, Appended Table 9 and Item 3, Appended Table 3 of Order for Enforcement

**Harmful substances requiring risk assessment**

Article 57-3 of the ISHL

**ISHL Working Environmental Evaluation Standards - Administrative Control Levels**

Subject to working environment measurements (related to Industrial Safety and Health Law Enforcement Order article 21 and Working Environment Evaluation Standards - administrative control levels). For further specification, refer to section 8 of the SDS.

**Strong mutagenic chemical substances**

New chemical substances with mutagenicity recognized (Article 57-3, Paragraph 1 of the Industrial Safety and Health Law).

**Poisonous and Deleterious Substances Control Law**

Deleterious substances - Poisonous and Deleterious Substance Control Law table 2 and Cabinet Order article 2

**Fire Service Law:**

Flammable liquids, group 4, alcohols, hazard rank II, 400 liters

**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)**

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed

Chemical name	CAS No.	Chemical Substances Control Law
Methanol	67-56-1	Not applicable. Not listed as a Specified Chemical Substance, Monitoring Chemical Substance, and Priority Assessment Chemical Substance.

**Ship (Marine Transportation) Safety Act**

See section 14 for more information

**Civil Aeronautics Act**

See section 14 for more information

**Act on Prevention of Marine Pollution and Maritime Disaster**

Subject to the Law Regarding the Prevention of Marine Pollution and Maritime Disaster and its Ordinance, Table 1- 1; category X

Subject to the Law Regarding the Prevention of Marine Pollution and Maritime Disaster and its Ordinance, Table 1- 2; category Y

**Act on Port Regulation Law**

See section 14 for more information

**Labor Standards Act**

Occupational illnesses caused by chemical substances - Labor Standards Act article 75, Enforcement Ordinance article 35 and Notification Designating Elements and Compounds of Chemical Substances and Occupational Illnesses Table 1-2 item 4-1

**Air Pollution Control Law**

Air pollutants with regulated emissions standards, Air Pollution Control Act article 3

Specified substances subject to measures in event of an accident per Air Pollution Control Law article 17, paragraph 1 and Enforcement Order article 10

Volatile organic compound per Air Pollution Control Law article 2, paragraph 4

**International Regulations****The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**International Inventories**

Contact supplier for inventory compliance status

<b>TSCA</b>	Listed
<b>DSL/NDL</b>	Listed on DSL.
<b>EINECS/ELINCS</b>	Listed.
<b>ENCS</b>	Listed.
<b>IECSC</b>	Listed.
<b>KECI</b>	Listed.
<b>PICCS</b>	Listed.
<b>AICS</b>	Listed.

**16. Other information****Prepared By** Product Safety Department**Issuing Date** 16-Nov-2021**Revision Date** 25-Jan-2024**Revision Note** Regulatory update. Change in classification. SDS sections updated: 1 - 16.**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:  
 PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
 STOT: Specific Target Organ Toxicity  
 ATE: Acute Toxicity Estimate  
 LC50: 50% Lethal Concentration  
 LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
 European Chemicals Agency  
 European Food Safety Authority (EFSA)  
 Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

**Disclaimer**

This SDS complies with the requirements of JIS Z 7253:2019 (Japan). The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**