

SAFETY DATA SHEET

1. Identification

Product identifier Malco Odor Fogger

Other means of identification
Product Code 1241

Recommended use Odor Eliminator

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information
Manufacturer

Company name Malco Products, Inc.
Address 361 Fairview Ave
Barberton, OH 44203
United States

Telephone Phone 800-253-2526
Fax 330-753-2025

Website www.malcopro.com
E-mail msdsinfo@malcopro.com

Contact person Technical Department

Emergency phone number Phone 1-800-424-9300

Supplier Not available.

2. Hazard identification

Physical hazards Flammable aerosols Category 1

Health hazards Serious eye damage/eye irritation Category 2
Specific target organ toxicity, single exposure Category 3 narcotic effects

Environmental hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable gas. Extremely flammable aerosol. Pressurized container: May burst if heated. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not pierce or burn, even after use. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Use only outdoors or in a well ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical assistance if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal	Dispose of waste and residues in accordance with local authority requirements. Dispose of contents/container (in accordance with related regulations).
Supplemental information	% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. Repeated exposure may cause skin dryness or cracking. Repeated exposure may cause skin dryness or cracking.
Other hazards	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
propan-2-one		67-64-1	70 - < 80
butane		106-97-8	10 - < 20
Other components below reportable levels			10 - < 20

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

#: This substance has been assigned Community workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret. All concentrations are in percent by weight (kg) unless ingredient is a gas. Gas concentrations are in percent by volume (l).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not use mouth-to-mouth method if victim inhaled the substance. For breathing difficulties, oxygen may be necessary. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash the skin immediately with soap and water. Call a physician or poison control center immediately. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Not likely, due to the form of the product. If swallowed, seek medical advice immediately and show this container or label. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep victim under observation. Keep victim warm.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. In case of fire: Stop leak if safe to do so. Use standard firefighting procedures and consider the hazards of other involved materials. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. Containers should be cooled with water to prevent vapor pressure build up. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Some of these materials, if spilled, may evaporate leaving a flammable residue.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable gas. Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Emergency personnel need self-contained breathing equipment. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Scoop up used absorbent into drums or other appropriate container. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
Environmental precautions	Avoid release to the environment. Refer to special instructions/safety data sheets. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Vapors may form explosive mixtures with air. May be ignited by open flame. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. These alone may be insufficient to remove static electricity. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Avoid exposure - obtain special instructions before use. Do not breathe mist or vapor. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. When using do not eat or drink. Should be handled in closed systems, if possible. Use only in area provided with appropriate exhaust ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. Use appropriate container to avoid environmental contamination. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

CAUTION Level 3 Aerosol.

Store locked up. Avoid exposure - obtain special instructions before use. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. The pressure in sealed containers can increase under the influence of heat. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Use appropriate container to avoid environmental contamination. Store in original tightly closed container. Store in a well-ventilated place. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
butane (CAS 106-97-8)	STEL	1000 ppm
propan-2-one (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
butane (CAS 106-97-8)	TWA	1000 ppm
propan-2-one (CAS 67-64-1)	STEL	1800 mg/m3
		750 ppm
	TWA	1200 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
		500 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
butane (CAS 106-97-8)	STEL	1000 ppm
propan-2-one (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
butane (CAS 106-97-8)	STEL	1000 ppm
propan-2-one (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Components	Type	Value
butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
propan-2-one (CAS 67-64-1)	STEL	1728 mg/m3 750 ppm
	TWA	1188 mg/m3 500 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
butane (CAS 106-97-8)	STEL	1000 ppm
propan-2-one (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
propan-2-one (CAS 67-64-1)	STEL	2380 mg/m3 1000 ppm
	TWA	1190 mg/m3 500 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
propan-2-one (CAS 67-64-1)	15 minute	750 ppm
	8 hour	500 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
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propan-2-one (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
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* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid exposure - obtain special instructions before use. Face-shield. Chemical respirator with organic vapor cartridge and full facepiece. Do not get in eyes. Eye wash fountain is recommended.

Skin protection

Hand protection

Avoid exposure - obtain special instructions before use. Wear appropriate chemical resistant gloves.

Other

Avoid exposure - obtain special instructions before use. Avoid contact with the skin. Wear chemical protective equipment that is specifically recommended by the manufacturer. Use of an impervious apron is recommended.

Respiratory protection

Avoid exposure - obtain special instructions before use. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Aerosol.

Physical state

Liquid.

Form

Aerosol. Compressed gas. Compressed liquefied gas.

Color

White.

Odor

Characteristic.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

< 20.0 °F (< -6.7 °C)

Evaporation rate

Not available.

Flammability (solid, gas)

Flammable gas. Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 1.8 %

Explosive limit - upper (%) 12.8 %

Vapor pressure

60 mm Hg psig

Vapor pressure temp.

68 °F (20 °C)

Vapor density

Not available.

Relative density

Not available.

Solubility(ies)

Solubility (water)

Not available.

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	32.49 kJ/g estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.75 - 0.8 (water =1)
VOC	30 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Risk of explosion.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Chlorine. Fluorine. Nitrates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritating to respiratory system.
Skin contact	Very toxic in contact with skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Harmful in contact with eyes.
Ingestion	Very toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity May cause respiratory irritation. Narcotic effects.

Components	Species	Test Results
propan-2-one (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Inhalation		
LC50	-	50.1 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation Harmful in contact with eyes. Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.
Skin sensitization Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

ACGIH Carcinogens

propan-2-one (CAS 67-64-1)

A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

propan-2-one (CAS 67-64-1)

Not classifiable as a human carcinogen.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

May cause damage to organs () through prolonged or repeated exposure.

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Not expected to be hazardous by WHMIS criteria. Hazardous by OSHA criteria. May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.

Further information

Symptoms may be delayed.

12. Ecological information**Ecotoxicity**

Toxic to aquatic life. Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
propan-2-one (CAS 67-64-1)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna)
		>= 10294 - <= 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		>= 4740 - <= 6330 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Partition coefficient n-octanol / water (log Kow)

butane

2.89

propan-2-one

-0.24

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations**Disposal instructions**

Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of contents/container (in accordance with related regulations). When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

D001: Waste Flammable material with a flash point <140 F

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information**TDG**

UN number UN1950
 UN proper shipping name AEROSOLS, flammable
 Transport hazard class(es)
 Class 2.1
 Subsidiary risk -
 Packing group Not assigned.
 Environmental hazards D
 Special precautions for user Not assigned.

IATA

UN number UN1950
 UN proper shipping name Aerosols, flammable
 Transport hazard class(es)
 Class 2.1
 Subsidiary risk -
 Packing group Not assigned.
 Environmental hazards No.
 ERG Code 10L
 Special precautions for user Not assigned.
 Other information
 Passenger and cargo aircraft Allowed with restrictions.
 Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950
 UN proper shipping name AEROSOLS, FLAMMABLE
 Transport hazard class(es)
 Class 2.1
 Subsidiary risk -
 Packing group Not assigned.
 Environmental hazards
 Marine pollutant No.
 EmS Not assigned.
 Special precautions for user Not assigned.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

IATA; IMDG; TDG**General information**

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

Canada. Excluded VOCs. Guidelines for Volatile Organic Compounds in Consumer Products. CEPA 1999. Environment Canada, as amended

propan-2-one (CAS 67-64-1)

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

propan-2-one (CAS 67-64-1)

Precursor Control Regulations

propan-2-one (CAS 67-64-1)

Class B

International regulations The product is classified and labelled in accordance with EC directives or respective national laws. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 03-04-2022

Revision date 03-04-2022

Version # 08

Further information HMIS® is a registered trade and service mark of the NPCA.

References

ACGIH
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: ACQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
Korea. Prohibited Chemical Substances (TCCL Article 11)
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
Korea. Restricted Chemical Substances (TCCL Article 11)
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
Korea. Toxic Chemicals (TCCL Article 10)
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012
JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)
GOST 30333-2007 Chemical production safety passport. General requirements.
GOST 31340-2013 Labeling of chemicals. General requirements.
GOST 32419-2013 Classification of chemical products. General requirements.
GOST 32424-2013 Classification of chemicals for environmental hazards. General principles.
GOST 12.1.007-76 Occupational safety standard system. Noxious substances. Classification and general safety requirements.
GOST 12.1.044-89. Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of substances and materials. Nomenclature of indices and methods of their determination.
GOST 19433-88. Dangerous goods. Classification and marking.
GOST 12.1.004-91. Occupational safety standards system. Fire safety. General requirements.
GOST 32425-2013 Mixtures classification of hazard for environmental.
GOST 32423-2013 Mixtures classification of hazard for health.

Disclaimer

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Revision information

Product and Company Identification: Synonyms
Hazards Identification: EU Hazard Classifications
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
GHS: Classification