

155-025

SDS Preparation Date (mm/dd/yyyy): 07/21/2017

## SAFETY DATA SHEET

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### SECTION 1. IDENTIFICATION

Product Identifier used on the label:

**ORIGINAL GAS LINE ANTI-FREEZE**

Stock No. : 426

Recommended use of the chemical and restrictions on use

: Gas line Anti-Freeze

Recommended restrictions: None known.

Chemical family

: Pure substance; saturated primary aliphatic alcohol.

Name, address, and telephone number  
of the manufacturer:

Kleen-Flo Tumbler Ind. Ltd.

75 Advance Blvd.

Brampton, ON,

L6T 4N1

Telephone # : 905-793-4311

24 Hr. Emergency Tel # : CANUTEC: 613-996-6666

**Guidelines for SDS Use:** The product described in this SDS is a consumer product. It is safe for use by consumers as described on the product label under normal foreseeable conditions. This SDS is designed to provide additional valuable safety and handling information.

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Alcohol odour.

OSHA: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification :

Flammable liquid - Category 2

Acute toxicity - Oral - Category 3

Acute toxicity - Dermal - Category 3

Acute toxicity - Inhalation - Category 3

Eye irritation - Category 2A

Reproductive toxicity - Category 2

Specific target organ toxicity, single exposure - Category 1

Label elements

Hazard pictogram(s)



Signal Word

**DANGER!**

Hazard statement(s)

Highly flammable liquid and vapour

Toxic if swallowed, in contact with skin or if inhaled.

Causes serious eye irritation.

Suspected of damaging the unborn child if inhaled.

Causes damage to the optic nerve and central nervous system.

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*Precautionary statement(s)*

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks and open flame. - No smoking.  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.  
Use explosion-proof electrical and ventilating equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wear protective gloves/clothing and eye/face protection.  
Wash hands and face 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 fumes, mists or vapours.  
In case of fire: Use water fog, dry chemical, CO2 or 'alcohol' foam for extinction.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Get medical attention/advice if you feel unwell.  
IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.  
Rinse mouth.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTRE or doctor/physician.  
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.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container in accordance with local regulation.

**Other hazards**

Other hazards which do not result in classification:

May cause mild skin irritation. May be harmful if absorbed through the skin. May be harmful if inhaled. Prolonged or repeated overexposure could cause adverse liver effects. Burning produces obnoxious and toxic fumes.

Environmental precautions: Avoid release to the environment.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Methanol	Carbinol Methyl hydrate Methyl alcohol	67-56-1	80-100%

**SECTION 4. FIRST-AID MEASURES****Description of first aid measures**

- Ingestion* : Call a physician or poison control centre immediately. Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention.
- Skin contact* : Immediately flush skin with running water for at least 15 minutes, while removing contaminated clothing. Get medical attention. Wash contaminated clothing before re-use.
- Eye contact* : Immediately flush eyes with running water for at least 20 minutes. Remove contact lenses if present and easy to do. Get medical attention.

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

: Toxic if swallowed. Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis. Suspected of damaging the unborn child. May cause fetotoxic (toxic to the fetus during the latter stages of pregnancy, often through the placenta) and teratogenic effects (causing malformations of the fetus), based on animal information. Causes damage to the optic nerve and central nervous system. May be harmful if inhaled. May be harmful if absorbed through the skin. May cause mild skin irritation.

Prolonged or repeated overexposure could cause adverse liver effects.

### Indication of any immediate medical attention and special treatment needed

: Treat symptomatically. Immediate medical attention is required. This product is a CNS depressant.  
Contains methanol. Acute exposure to methanol, either through ingestion or breathing high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Medical supervision for minimum 48 hours. Symptoms and signs are usually limited to the Central Nervous System (CNS), eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended.

Administration of ethanol can slow the metabolism of methanol, thus reducing the potential for harmful effects.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

: Extinguishing media - small fires: Use water fog or fine spray, foams, carbon dioxide or dry chemical.  
Extinguishing media - large fires: AFFF(R) [Aqueous Film Forming Foam (alcohol resistant)] type with either a 3% or 6% foam proportioning system; Water spray (see note in Unsuitable Extinguishing Media).

#### *Unsuitable extinguishing media*

: Do not use a solid water stream as it may scatter and spread fire. Water may be ineffective because it may not cool product below the flashpoint.  
General purpose synthetic foams or protein foams.

### Special hazards arising from the substance or mixture / Conditions of flammability

: Highly flammable liquid and vapour. Will be ignited by heat, sparks, flame, or other ignition sources. Burns with a nearly invisible flame. Vapours are heavier than air and collect in confined and low-lying areas. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

### Flammability classification (OSHA 29 CFR 1910.106)

: Flammable liquid - Category 2

### Hazardous combustion products

: Carbon oxides; formaldehyde; Other unidentified organic compounds.

### Special protective equipment and precautions for firefighters

#### *Protective equipment for fire-fighters*

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

#### *Special fire-fighting procedures*

: Fight fires from a safe distance. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Individuals involved in the cleanup must wear appropriate personal protective equipment. For personal protection see section 8.

**Environmental precautions**

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

**Methods and material for containment and cleaning up**

- : Ventilate the area. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required. Do not use combustible absorbents, such as sawdust.

**Special spill response procedures**

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).  
US CERCLA Reportable quantity (RQ): Methanol. (5000 lbs / 2270 kg)

### SECTION 7. HANDLING AND STORAGE

**Precautions for safe handling**

- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only in well-ventilated areas. Wear suitable protective equipment during handling. Do not ingest or swallow. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat, sparks and open flame. - No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid contact with incompatible materials. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not use pressure to empty drums. Do not cut, weld, drill or grind on or near this container. Follow labeled warnings even after container is emptied. For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Tanks must be grounded and vented and should have vapour emission controls. Tanks must be diked. Anhydrous methanol is non-corrosive to most metals at ambient temperatures except lead and magnesium. However coatings of copper (or copper alloys), zinc (including galvanized steel) or aluminum are unsuitable for storage as they are attacked slowly. Mild steel is the recommended construction material.

**Conditions for safe storage**

- : Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area. Equip bulk storage tank with overflow protection such as high level alarms or secondary containment. Attacks some elastomers, rubber, plastic and coatings.

**Incompatible materials**

- : Acids; Powdered metals; Alkali metals; Isocyanates; Strong oxidizers (e.g. Chlorine, Peroxides, etc.).

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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<b>Exposure Limits:</b>				
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Methanol	200 ppm (skin)	250 ppm (skin)	200 ppm (260 mg/m <sup>3</sup> )	N/Av

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations): 6000 ppm

**Exposure controls****Ventilation and engineering measures**

- : Ensure adequate ventilation, especially in confined areas. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Use explosion-proof electrical and ventilating equipment.

**Respiratory protection**

- : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Cartridge type respirators are not recommended. Wear self-contained breathing apparatus with a full face piece operated in the positive pressure mode. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

**Skin protection**

- : Wear impervious gloves, such as butyl rubber. Unsuitable material: Natural rubber; Neoprene.; Nitrile rubber; Polyethylene; polyvinyl alcohol; Polyvinylchloride. Advice should be sought from glove suppliers. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

**Eye / face protection**

- : Chemical splash goggles are recommended. A full face shield may also be necessary.

**Other protective equipment**

- : An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

**General hygiene considerations**

- : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** : Clear colourless liquid.

**Odour** : Alcohol

**Odour threshold** : 50-100 ppm

**pH** : N/Av

**Melting/Freezing point** : -97.8°C (-144°F)

**Initial boiling point and boiling range**

: 64.5°C (148°F)

**Flash point** : 12°C (53.6°F)

**Flashpoint (Method)** : closed cup

**Evaporation rate (BuAe = 1)** : <1

**Flammability (solid, gas)** : Not applicable.

**Lower flammable limit (% by vol.)**

: 7.3%

**Upper flammable limit (% by vol.)**

: 36%

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**Oxidizing properties** : None.

**Explosive properties** : Not expected to be sensitive to mechanical impact. May be sensitive to static discharge. Vapours in the flammable range may be ignited by a static discharge of sufficient energy.

**Vapour pressure** : 92 mmHg @ 20°C

**Vapour density** : >1.1

**Relative density / Specific gravity** : 0.79

**Solubility in water** : Complete

**Other solubility(ies)** : Soluble in all proportions in ethanol, benzene, other alcohols, chloroform, diethyl ether, other ethers, esters, ketones and most organic solvents.

**Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : log P (oct) = - 0.8

**Auto-ignition temperature** : 464°C (867.2°F)

**Decomposition temperature** : N/Av

**Viscosity** : 0.75 cSt @ 20C (68°F)

**Volatiles (% by weight)** : 100%

**Volatile organic Compounds (VOC's)** : N/Av

**Absolute pressure of container** : N/Av

**Flame projection length** : N/Av

**Other physical/chemical comments** : Molecular Weight: 32.04 g/mol  
Molecular formula: C-H4-O

## SECTION 10. STABILITY AND REACTIVITY

**Reactivity** : Not normally reactive.  
Attacks some elastomers, rubber, plastic and coatings.  
Anhydrous methanol is non-corrosive to most metals at ambient temperatures except lead and magnesium. Coatings of copper (or copper alloys), zinc (including galvanized steel) or aluminium are attacked slowly.

**Chemical stability** : Stable under the recommended storage and handling conditions prescribed.

**Possibility of hazardous reactions** : Hazardous polymerization does not occur.

**Conditions to avoid** : Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.

**Incompatible materials** : Acids; Powdered metals; Alkali metals; Isocyanates; Strong oxidizers (e.g. Chlorine, Peroxides, etc.).

**Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

**Routes of entry inhalation** : YES

**Routes of entry skin & eye** : YES

**Routes of entry Ingestion** : YES

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Routes of exposure skin absorption: YES

**Potential Health Effects:**

Signs and symptoms of short-term (acute) exposure

*Sign and symptoms Inhalation*

: Toxic if inhaled. May cause irritation of the nose, throat, mucous membranes, and respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Affected person could experience a latent period of no symptoms, followed by blurred vision and possibly blindness. Could also cause convulsions, coma, respiratory arrest and death.

*Sign and symptoms ingestion*

: Toxic if swallowed. May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. May cause blindness if swallowed - cannot be made non-poisonous. Could also cause convulsions, coma, respiratory arrest and death.

*Sign and symptoms skin*

: Toxic in contact with skin. May cause mild skin irritation. May be absorbed and cause symptoms similar to those for inhalation.

*Sign and symptoms eyes*

: Causes serious eye irritation.

**Potential Chronic Health Effects**

: Prolonged or repeated skin contact may cause drying and irritation. Prolonged or repeated overexposure could cause adverse liver effects.

**Mutagenicity**

: Not expected to be mutagenic in humans.

**Carcinogenicity**

: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects & Teratogenicity**

: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:  
Reproductive toxicity - Category 2. Suspected of damaging the unborn child.  
Contains Methanol. Methanol may cause fetotoxic and teratogenic effects at doses which are not maternally toxic, based on animal data. May cause fetotoxic (toxic to the fetus during the latter stages of pregnancy, often through the placenta) and teratogenic effects (causing malformations of the fetus), based on animal information.

**Sensitization to material**

: Not expected to be a skin or respiratory sensitizer.

**Specific target organ effects**

: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:  
Specific target organ toxicity - single exposure - Category 1. Causes damage to the optic nerve and central nervous system.

Other hazards which do not result in classification:

Prolonged or repeated overexposure could cause adverse liver effects.

**Medical conditions aggravated by overexposure**

: Pre-existing skin, eye, respiratory and central nervous system disorders.

**Synergistic materials**

: Methanol can increase the toxicity of other liver toxins (e.g. Carbon tetrachloride).

**Toxicological data**

: See below for toxicological data on the substance.

<b>Chemical name</b>	<b>LC<sub>50</sub>(4hr) inh. rat</b>	<b>LD<sub>50</sub></b>	
		<b>(Oral, rat)</b>	<b>(Rabbit, dermal)</b>
Methanol	> 5000 ppm/6H (4.1 mg/L/4H (vapour))	5628 mg/kg (rat) The estimated human lethal dose is: 300 - 1000 mg/kg	> 393 mg/kg (Monkey) 10 000 mg/kg (rabbit)

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## Other important toxicological hazards

: CNS depression may result from extreme exposures. May cause blindness if swallowed.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

**Ecotoxicity data:**

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Methanol	67-56-1	15 400 mg/L (Bluegill sunfish)	446.7 mg/L/28-day (Fathead minnow) (QSAR)	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Methanol	67-56-1	> 10 000 mg/L (Daphnia magna)	208 mg/L (QSAR)	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Methanol	67-56-1	22 000 mg/L/96hr (Green algae)	N/Av	None.

**Persistence and degradability:** Methanol is readily biodegradable.

**Bioaccumulation potential** : Does not accumulate in organisms.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Methanol (CAS 67-56-1)	- 0.82 to - 0.64	<10 species: fish

**Mobility in soil** : No data is available on the product itself.

**Other Adverse Environmental effects**

: No data is available on the product itself.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Handling for Disposal**

: See Section 7 (Handling and Storage) for further details. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.

**Methods of Disposal**

: Dispose in accordance with all applicable federal, state, provincial and local regulations. Reuse or recycling should be given priority over disposal. Large volumes may be suitable for re-distillation or, if contaminated, incinerated. Can be disposed of in a sewage treatment facility.

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### RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

### SECTION 14 - TRANSPORTATION INFORMATION

TDG Classification:

#426- Consumer commodity

### Special precautions for user

: Keep away from heat, sparks and open flame. - No smoking. Appropriate advice on safety must accompany the package.

### Environmental hazards

: See Section 12 for more environmental information.

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

: This information is not available.

### SECTION 15 - REGULATORY INFORMATION

#### US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Methanol	67-56-1	Yes	5000 lbs / 2270 kg	None.	Yes	1%

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SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

**US State Right to Know Laws:**

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Methanol	67-56-1	No	Developmental	Yes	Yes	Yes	Yes	Yes	Yes

**Canadian Information:**

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

**International Information:**

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Methanol	67-56-1	200-659-6	Present	Present	(2)-201	KE-23193	Present	HSR001186

**SECTION 16. OTHER INFORMATION****Legend**

: ACGIH: American Conference of Governmental Industrial Hygienists  
 CA: California  
 CAS: Chemical Abstract Services  
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CFR: Code of Federal Regulations  
 CNS: Central Nervous System  
 DOT: Department of Transportation  
 EmS: Emergency Schedules  
 EPA: Environmental Protection Agency  
 ERG: Emergency Response Guidebook  
 HMIS: Hazardous Materials Identification System  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer

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Inh: Inhalation  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 MA: Massachusetts  
 MN: Minnesota  
 MSHA: Mine Safety and Health Administration  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NFPA: National Fire Protection Association  
 NIOSH: National Institute of Occupational Safety and Health  
 NJ: New Jersey  
 NTP: National Toxicology Program  
 OSHA: Occupational Safety and Health Administration  
 PA: Pennsylvania  
 PEL: Permissible exposure limit  
 RCRA: Resource Conservation and Recovery Act  
 RI: Rhode Island  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short Term Exposure Limit  
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
 TLV: Threshold Limit Values  
 TSCA: Toxic Substance Control Act  
 TWA: Time Weighted Average  
 WHMIS: Workplace Hazardous Materials Identification System

### References

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2012.
2. International Agency for Research on Cancer Monographs, searched 2012.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2012 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - July 2011 version.
6. California Proposition 65 List - July 20, 2012 version.

### Preparation Date (mm/dd/yyyy)

: 07/21/2017

### Other special considerations for handling

: Provide adequate information, instruction and training for operators.

### HMIS Rating

: \*- Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: *2	Flammability: 3	Reactivity: 0
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### NFPA Rating

0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	4 - Severe
Health: 1	Flammability: 3	Instability: 0	Special Hazards:	None

Prepared by: Kleen-Flo Tumbler Ind. Ltd.