

SAFETY DATA SHEET

1. Identification

Product identifier	KLEEN SLIP GREASELESS LUBRICANT		
Other means of identification			
Product code	740/742		
Recommended use	LUBRICANT		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	Kleen-Flo Tumbler Ind Limited		
Address	75 Advance Blvd Brampton, Ontario L6T 4N1 Canada		
Telephone	General Assistance	1-905-793-4311	
E-mail	Not available.		
Emergency phone number	Emergency	905-793-4311 (Monday to Friday 8.30am to 4.30pm EST) (English Language only)	

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Reproductive toxicity (fertility)	Category 2
	Aspiration hazard	Category 1

Label elements



Signal word	Danger	
Hazard statement	Extremely flammable aerosol. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. Suspected of damaging fertility.	
Precautionary statement		
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not pierce or burn, even after use. Avoid breathing gas. Wash thoroughly after handling. 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 SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.	
Storage	Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Other hazardsNone known.

Supplemental informationNone.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isobutane		75-28-5	30-60
Heptane, branched, cyclic and linear		426260-76-6	10-30
Naphtha (petroleum), Hydrotreated Light		64742-49-0	10-30
Solvent Naphtha (Petroleum), Light Aliphatic		64742-89-8	10-30
Propane		74-98-6	5-10
Cyclohexane		110-82-7	3-7
Naphtha (petroleum), Hydrotreated Heavy		64742-48-9	1-5
n-Hexane		110-54-3	0.1-1
Octane		111-65-9	0.1-1
Other components below reportable levels			1-5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration of the above listed chemicals are being withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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.

5. Fire-fighting measures

Suitable extinguishing media	Water spray.
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. 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.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
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. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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. 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 entry into waterways, sewer, basements or confined areas. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
Environmental precautions	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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. 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. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. 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. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Isobutane (CAS 75-28-5)	STEL	1000 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (CAS 111-65-9)	TWA	300 ppm

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

Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	344 mg/m3
		100 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
		50 ppm
Octane (CAS 111-65-9)	TWA	1400 mg/m3
		300 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)		
Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
n-Hexane (CAS 110-54-3)	TWA	20 ppm
Octane (CAS 111-65-9)	TWA	300 ppm
Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)		
Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Isobutane (CAS 75-28-5)	STEL	1000 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (CAS 111-65-9)	TWA	300 ppm
Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)		
Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Isobutane (CAS 75-28-5)	TWA	800 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)		
Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	1030 mg/m3
n-Hexane (CAS 110-54-3)	TWA	300 ppm
		176 mg/m3
		50 ppm
Octane (CAS 111-65-9)	STEL	1750 mg/m3
		375 ppm
		1400 mg/m3
Propane (CAS 74-98-6)	TWA	300 ppm
		1800 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices				
Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Canada - Alberta OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Canada - British Columbia OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Canada - Manitoba OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Canada - Ontario OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Canada - Quebec OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Canada - Saskatchewan OELs: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
US ACGIH Threshold Limit Values: Skin designation	
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

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. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eyeface protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. When using do not 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	
Physical state	Gas.
Form	Aerosol.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	89.92 °F (32.18 °C) estimated
Flash point	-156.0 °F (-104.4 °C) PROPELLANT estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.2 % estimated
Flammability limit - upper (%)	9.3 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
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.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Harmful if inhaled.	
Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 32880 mg/m3, 4 Hours > 5540 ppm, 4 Hours
Oral		
LD50	Rabbit	> 5000 mg/kg
	Rat	> 5000 mg/kg
Isobutane (CAS 75-28-5)		
<u>Acute</u>		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l
Naphtha (petroleum), Hydrotreated Heavy (CAS 64742-48-9)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 5000 mg/m3, 4 Hours > 4980 mg/m3 > 4980 mg/m3, 4 Hours > 4.96 mg/l, 4 Hours
Oral		
LD50	Rat	4820 mg/kg

Components	Species	Test Results
Naphtha (petroleum), Hydrotreated Light (CAS 64742-49-0)		
<u>Acute</u>		
Dermal LD50	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours
	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation LC50	Rat	> 5000 mg/m3, 4 Hours
		> 4980 mg/m3
		> 4980 mg/m3, 4 Hours
		> 4.96 mg/l, 4 Hours
		13700 ppm, 4 Hours
Oral LD50	Rat	4820 mg/kg
n-Hexane (CAS 110-54-3)		
<u>Acute</u>		
Dermal LD50	Rabbit	> 2000 mg/kg, 4 Hours
		> 5 ml/kg, 4 Hours
Inhalation LC50	Rat	> 5000 ppm, 24 Hours
		> 31.86 mg/l
		73860 ppm, 4 Hours
Oral LD50	Rat	24 ml/kg
		24 g/kg
		Wistar rat
Octane (CAS 111-65-9)		
<u>Acute</u>		
Dermal LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation LC50	Rat	> 24.88 mg/l, 4 Hours
Oral LD50	Rat	> 5000 mg/kg
Propane (CAS 74-98-6)		
<u>Acute</u>		
Inhalation LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h
Solvent Naphtha (Petroleum), Light Aliphatic (CAS 64742-89-8)		
<u>Acute</u>		
Dermal LD50	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation LC50	Rat	> 5000 mg/m3, 4 Hours
		> 4980 mg/m3

Components	Species	Test Results
Oral		> 4980 mg/m3, 4 Hours
LD50	Rat	> 4.96 mg/l, 4 Hours 4820 mg/kg

* Estimates for product may be based on additional component data not shown.	
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Canada - Alberta OELs: Irritant	
Octane (CAS 111-65-9)	Irritant
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	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	Not available.
Reproductive toxicity	Suspected of damaging fertility. Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	
Aspiration hazard	May be fatal if swallowed and enters airways.

12. Ecological information

Ecotoxicity	Toxic to aquatic life with long lasting effects.
-------------	--

Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas)
n-Hexane (CAS 110-54-3)		23.03 - 42.07 mg/l, 96 hours
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas)
		2.101 - 2.981 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	
Partition coefficient n-octanol / water (log Kow)	
Cyclohexane	3.44
Isobutane	2.76
n-Hexane	3.9
Octane	5.18
Propane	2.36

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	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	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).
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	UN1950
UN number	AEROSOLS, flammable
UN proper shipping name	
Transport hazard class(es)	2.1
Class	-
Subsidiary risk	Not applicable.
Packing group	Yes
Environmental hazards	Read safety instructions, SDS and emergency procedures before handling.
Special precautions for user	

This product is exempted under TDG section 1.17 as a limited quantity and may be shipped as a limited quantity.

15. Regulatory information

Canadian regulations

- Controlled Drugs and Substances Act
 - Not regulated.
- Export Control List (CEPA 1999, Schedule 3)
 - Not listed.
- Greenhouse Gases
 - Not listed.
- Precursor Control Regulations
 - Not regulated.

International regulations

- 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 Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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	23/11/2023
Version #	01

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.

Disclaimer	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.
------------	--