



SAFETY DATA SHEET

SDS00370
MARKAWAY

Preparation Date: 12/May/2021

Version: 1

1. IDENTIFICATION

Product identifier

Product Name MARKAWAY

Other means of identification

Product Code(s) SDS00370

Synonyms

Recommended use of the chemical and restrictions on use

Recommended Use Solvent

Restricted Uses No information available

Initial Supplier Identifier

Kleargo Inc.
5555 Bois-Franc
St-Laurent, QC H4S 1B1
Telephone: 1-800-661-4123

Emergency telephone number

24 Hour Emergency Phone Number (CANUTEC): 1-888-226-8832 (1-888-CAN-UTEC)

2. HAZARD IDENTIFICATION

Hazardous Classification of the substance or mixture

Flammable liquids	Category 4
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Aspiration toxicity	Category 1

Label elements**Hazard pictograms****Signal Word: Danger****Hazard statements**

Combustible liquid
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May be fatal if swallowed and enters airways

Precautionary Statements**Prevention**

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Response

Specific treatment (see first aid instructions on label)
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 ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

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 to an approved waste disposal plant

Other Information

Unknown acute toxicity No information available

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

Chemical Name	N/AV	Weight-%	
Glycol Ether Mixture	Blend	60 - 100%	

All other ingredients are considered non hazardous and are not required to be reported or divulged as per WHMIS / GHS 2015 Regulations.

4. FIRST AID**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact

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. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider

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. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed:

Harmful if swallowed Causes skin irritation Symptoms include pain, redness and tearing. Effects may be slow to heal. May cause severe eye irritation. May cause headache. May cause corneal injury. Prolonged or repeated exposure may cause skin irritation, even a burn. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Moderately toxic Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause more severe response if confined to skin or skin is abraded (scratched or cut). Large doses are harmful if swallowed.

Indication of any immediate medical attention and special treatment needed:**Note to physicians**

Treatment based on sound judgment of physician and individual reactions of patient. Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS

depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Alcohol resistant foam. Carbon dioxide (CO₂). Dry chemical. Water spray.

Specific hazards arising from the substance or mixture

Isolate and restrict area access. Stop leak only if safe to do so. Move containers from fire area if you can do it without risk. Fight fire from a safe distance and from a protected location. Use flooding quantities of water for fire and water spray or fog for vapors. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure build-up which could result in container rupture. This material may produce a floating fire hazard in extreme fire conditions. This product can produce flammable vapors which may travel to a source of ignition and flash back. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous combustion products

Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Flammable. For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation

of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store in accordance with good industrial practices. Do not store in aluminum, copper, copper alloys and galvanized containers. Store in carbon steel, stainless steel, Teflon.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical Name	Alberta OEL	British Columbia OEL	Ontario	Quebec OEL	Exposure Limit - ACGIH	Immediately Dangerous to Life or Health - IDLH
Glycol Ether Mixture N/AV - blend	TWA: 20 ppm TWA: 97 mg/m ³	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm TWA: 97 mg/m ³	20 ppm TLV-TWA	700 ppm

Consult local authorities for recommended exposure limits

Appropriate engineering controls

Engineering controls

Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Hand protection

Use gloves chemically resistant to this material, examples of preferred glove barrier materials include: Butyl rubber gloves. Ethyl Vinyl Alcohol Laminate (EVAL). Examples of acceptable glove barrier materials include: Natural rubber gloves. Neoprene gloves. Nitrile gloves. Viton gloves. Polyvinylchloride (PVC) gloves. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials as well as the instructions/specifications provided by the glove supplier.

Skin and body protection

Impervious clothing. Rubber apron. The selection of personal protective equipment varies depending upon conditions of use.

Respiratory protection

If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator.

General hygiene considerations

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	Colorless
Odor	Ether
Odor threshold	No information available

PROPERTIES

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	-77 °C / -107 °F	
Initial boiling point/boiling range	171 °C / 340 °F	
Flash point	65 °C / 149 °F	Tag Closed Cup
Evaporation rate	0.06	
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	10.6	
Lower flammability limit:	1.3	
Vapor pressure	0.4 mmHg 20°C	
Relative vapor density	No data available	None known
Specific Gravity	0.9005 - 0.9040 @ 20°C	
Water solubility	Soluble in water	
Solubility in other solvents	No data available	
Partition coefficient	No data available	None known
Autoignition temperature	244 °C / 471 °F	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Molecular weight	118.2 g/mol	
VOC Percentage Volatility	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity/Chemical Stability

Stable

Possibility of hazardous reactions

No additional remark.

Hazardous polymerization

Will not occur.

Conditions to avoid

Avoid excessive heat, open flames and all ignition sources. Generation of gas during decomposition can cause pressure in closed systems. Avoid contact with metals such as: zinc, magnesium, aluminum and galvanized metals. Do not distill to dryness. Product can oxidize at elevated temperatures.

Incompatible materials

Strong bases. Oxidizing agents. Strong acids.

Hazardous decomposition products

Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Inhalation**

May cause headache. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

Eye contact

Symptoms include pain, redness and tearing. Effects may be slow to heal. May cause severe eye irritation. May cause corneal injury.

Skin contact

Causes skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined to skin or skin is abraded (scratched or cut).

Ingestion

Harmful if swallowed. Aspiration into the lungs during ingestion or vomiting may lead to chemical pneumonitis. Moderately toxic.

Information on toxicological effects**Symptoms**

Excessive exposure to ethylene glycol monobutyl ether may cause hemolysis, thereby impairing the blood's ability to transport oxygen. Repeated exposure may cause red blood cell hemolysis, leading to possible kidney and liver damage.

Numerical measures of toxicity**Acute toxicity**

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

ATEmix (oral)	470.00 mg/kg
ATEmix (dermal)	1,100.00 mg/kg
ATEmix (inhalation-dust/mist)	1.50 mg/l

Unknown acute toxicity No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Glycol Ether Mixture N/AV - blend	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Causes skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined to skin or skin is abraded (scratched or cut).

Serious eye damage/eye irritation

Symptoms include pain, redness and tearing. Effects may be slow to heal. May cause severe eye irritation. May cause corneal injury.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Glycol Ether Mixture N/AV - blend	A3	Group 3	Not available	Not available

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity

Ethylene glycol monobutyl ether did not cause birth defects in animals; other effects were seen in the fetus only at doses that caused toxic effects to the mother.

Specific target organ systemic toxicity - single exposure

No information available.

Specific target organ systemic toxicity - repeated exposure

No information available.

Aspiration hazard

May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacea
Glycol Ether Mixture N/AV - blend	Not available	1490 mg/L LC50 (Lepomis macrochirus) 96 h static 2950 mg/L LC50 (Lepomis macrochirus) 96 h	Not available	EC50: >1000mg/L (48h, Daphnia magna)

Persistence and degradability No information available.**Bioaccumulation** No information available.**Component Information**

Chemical Name	Partition coefficient
Glycol Ether Mixture N/AV - blend	0.81

Other adverse effects No information available.**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Do not reuse empty containers.

14. TRANSPORT INFORMATION

TDG (Canada):

UN Number	Not applicable
Shipping name	Not regulated
Class	Not applicable
Packing Group	Not applicable
Marine pollutant	Not available.

DOT (U.S.)

UN Number	Not applicable
Shipping name	Not regulated
Class	Not applicable
Packing Group	Not applicable
Marine pollutant	Not available

15. REGULATORY INFORMATION

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

U.S. Regulatory Rules

Chemical Name	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Glycol Ether Mixture N/AV - blend	Not Listed	Not Listed	Listed

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA:	Health hazards 3	Flammability 2	Instability 0	Physical and chemical properties -
HMIS Health Rating:	Health hazards 3	Flammability 2	Physical hazards 0	Personal protection X

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Prepared By: Kleargo Inc.

Preparation Date: 12/May/2021

Revision Date: 12/May/2021

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Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For

product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Kleargo.

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End of Safety Data Sheet