SAFETY DATA SHEET

CO00432
CITRASOLVE

Preparation Date: 04/Dec/2019 Version: 2

1. IDENTIFICATION

Product identifier

Product Name CITRASOLVE

Other means of identification

SDS Number CO00432

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Industrial degreaser.

Restricted Uses No information available

Initial Supplier Identifier
Relay Distributing
6005 50th Avenue
Lloydminister, Saskatchewan
S9V 2A4
Telephone: 1-306-825-4322

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 3
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
Skin sensitization	Category 1

Carcinogenicity	Category 1B

Label elements

Hazard pictograms

Signal Word: Danger

Hazard statements
Flammable liquid and vapor
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause cancer

Precautionary Statements

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

Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
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 cool

Disposal
Dispose of contents/container to an approved waste disposal plant

Very toxic to aquatic life with long lasting effects

Unknown acute toxicity No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Name	CAS No	Weight-% (W/W)	Synonyms
Ethylene Glycol Monobutyl Ether	111-76-2	40 - 50%	Ethylene Glycol Monobutyl Ether
D-limonene	5989-27-5	40 - 50%	D-limonene
Nonylphenol ethoxylate	9016-45-9	20 - 30%	Nonylphenol ethoxylate

4. FIRST AID MEASURES

Description of first aid measures

General advice
IF exposed or concerned: Get medical advice/attention. 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. May cause an allergic skin reaction. 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. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed:

May cause Central Nervous System effects. May be harmful if swallowed May cause moderate skin irritation. May cause severe eye irritation. May cause dizziness. Exposure to high vapor concentrations may cause headache and nausea.

Indication of any immediate medical attention and special treatment needed:

Note to physicians
Treat symptomatically. Treatment based on sound judgment of physician and individual reactions of patient. No specific antidote.

5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the substance or mixture
This product can produce flammable vapors which may travel to a source of ignition and flash back.

Hazardous combustion products
Carbon monoxide. Carbon dioxide.

Special protective equipment and precautions 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. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Environmental precautions

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

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. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

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

Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Use good personal hygiene. Do not ingest. Ensure proper electrical grounding procedures are in place. Use of non-sparking or explosion proof equipment may be necessary, depending upon the type of operation.

Conditions for safe storage, including any incompatibilities

Store in accordance with good industrial practices. Keep containers tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition.

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
Ethylene Glycol Monobutyl Ether 111-76-2	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
D-limonene 5989-27-5	Not available	Not available	Not available	Not available	Not available	Not available
Nonylphenol ethoxylate 9016-45-9	Not available	Not available	Not available	Not available	Not available	Not available

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; also wear a face shield if splashing hazard exists.

Hand protection
Rubber gloves.

Skin and body protection
Apron, coveralls and/or other resistant protective clothing.

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

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	Clear Yellow
Odor	Citrus
Odor threshold	No information available

PROPERTIES	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	-40 °C / -40 °F	
Initial boiling point/boiling range	165 °C / 329 °F	None known
Flash point	53 °C / 127 °F	Pensky-Martens Closed Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit:	6.5	
Lower flammability limit:	0.7	
Vapor pressure	<1 mmHg @ 20°C	
Relative vapor density	No data available	None known
Specific Gravity	0.88	
Water solubility	Insoluble	
Solubility in other solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature	250 °C / 482 °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	No information available	
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.

Incompatible materials
Oxidizing agents.

Hazardous decomposition products
Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Exposure to high vapor concentrations may cause headache and nausea.

Eye contact
May cause severe eye irritation.

Skin contact
May cause moderate skin irritation.

Ingestion
May be harmful if swallowed. May cause Central Nervous System effects. May cause dizziness.

Information on toxicological effects

Symptoms
Prolonged and repeated contact with the skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Excessive exposure to ethylene glycol monobutyl ether may cause hemolysis, thereby impairing the blood's ability to transport oxygen. Repeated inhalation or ingestion may cause central nervous system and gastrointestinal disturbances.

Numerical measures of toxicity

Acute toxicity

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

ATEmix (oral)	646.00 mg/kg
ATEmix (dermal)	1,798.00 mg/kg
ATEmix (inhalation-dust/mist)	1.50 mg/l

Unknown acute toxicity No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol Monobutyl Ether 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
D-limonene 5989-27-5	= 4400 mg/kg (Rat) = 5200 mg/kg (Rat) = 5300 mg/kg (Rat)	> 5 g/kg (Rabbit)	Not available
Nonylphenol ethoxylate 9016-45-9	= 1310 mg/kg (Rat) = 2590 mg/kg (Rat) = 1300 mg/kg (Rat) = 1410 µL/kg (Rat)	= 1780 µL/kg (Rabbit) = 2 mL/kg (Rabbit) = 1800 µL/kg (Rabbit) = 2830 µL/kg (Rabbit)	Not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
May cause moderate skin irritation.

Serious eye damage/eye irritation
May cause severe eye irritation.

Respiratory or skin sensitization
May cause sensitization by skin contact.

Germ cell mutagenicity
No information available.

Carcinogenicity
In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were seen in mice but not rats. These effects are not believed to be relevant to humans, if the material is handled in accordance with proper industrial handling, exposures should not pose any carcinogenic risk to man.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene Glycol Monobutyl Ether 111-76-2	A3	Group 3	Not available	Not available
D-limonene 5989-27-5	Not available	Group 3	Not available	X
Nonylphenol ethoxylate 9016-45-9	Not available	Not available	Not available	Not available

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity
In laboratory animal studies for Glycol Ether EB, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. 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
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
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Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacea
Ethylene Glycol Monobutyl Ether 111-76-2	Not available	1490 mg/L LC50 (Lepomis macrochirus) 96 h static 2950 mg/L LC50 (Lepomis macrochirus) 96 h	Not available	EC50: 1698 - 1940mg/L (24h, Daphnia magna) EC50: >1000mg/L (48h, Daphnia magna)
D-limonene 5989-27-5	Not available	0.619 - 0.796 mg/L LC50 (Pimephales promelas) 96 h flow-through 35 mg/L LC50	Not available	Not available

		(Oncorhynchus mykiss) 96 h		
Nonylphenol ethoxylate 9016-45-9	Not available	Not available	Not available	Not available

Persistence and degradability No information available.

Bioaccumulation No information available.

Component Information

Chemical Name	Partition coefficient
Ethylene Glycol Monobutyl Ether 111-76-2	0.81
D-limonene 5989-27-5	Not available
Nonylphenol ethoxylate 9016-45-9	Not available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld containers.

14. TRANSPORT INFORMATION

TDG (Canada):

UN Number	UN1993
Shipping name	FLAMMABLE LIQUID N.O.S. (D'LIMONENE)
Class	3
Packing Group	III
Marine pollutant	Yes.
Note	Not regulated under the Transportation of Dangerous Goods Act when transported by road or rail in packagings or containers of 450 L or less (waste excluded). Marine Pollutant designation is applicable only if shipped over water.

DOT (U.S.)

UN Number	UN1993
Shipping name	FLAMMABLE LIQUID N.O.S. (D'LIMONENE)
Class	3
Packing Group	III
Marine pollutant	Yes

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:
Ethylene Glycol Monobutyl Ether - 111-76-2	Not Listed	Not Listed	Listed
D-limonene - 5989-27-5	Not Listed	Not Listed	Not Listed
Nonylphenol ethoxylate - 9016-45-9	Not Listed	Not Listed	Listed

International Inventories

TSCA All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

DSL/NDSL All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

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

NFPA:	**Health hazards** 3	**Flammability** 2	**Instability** 0	**Physical and chemical properties** -
HMIS:	**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

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End of Safety Data Sheet