SAFETY DATA SHEET

DP-LUBRICANT BLUE

Section 1. Identification

Product identifier : DP-LUBRICANT BLUE

Cat. No. : 40700106, 40700108

Container size : 1 l, 4 l

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Cooling and lubricating agent for grinding and polishing of materialographic specimens.

Area of application : Professional applications.

Supplier's details : Struers Ltd
6200 Edwards Blvd.
Ontario
L5T 2V7 Mississauga
Canada

Telephone: +1 (905) 814 8855

e-mail address of person responsible for this SDS : sdsquestions@struers.dk

Emergency telephone number (with hours of operation) : Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414
British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911
Ontario:
Poison Centre: 1-800-268-9017
Québec:
Poison Control Centre: 1-800-463-5060
Infotrac:
1-800-535-5053

Section 2. Hazard identification

Classification of the substance or mixture :

H225	FLAMMABLE LIQUIDS - Category 2
H319	EYE IRRITATION - Category 2A
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
	Health Hazards Not Otherwise Classified - Category 1

GHS label elements

Section 2. Hazard identification

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys, liver)
Prolonged or repeated contact may dry skin and cause irritation.

Precautionary statements

Prevention : P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe vapor.
P264 - Wash thoroughly after handling.

Response : P314 - Get medical advice or attention if you feel unwell.
P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	Other names	% (w/w)	Identifiers
ethanol	-	≥65 - ≤85	CAS: 64-17-5
ethanediol	-	≥10 - ≤30	CAS: 107-21-1
Isopropyl alcohol	-	≥5 - ≤10	CAS: 67-63-0

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Section 4. First-aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
ethanol	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 1250 ppm. TWA 8 hours: 1000 ppm. **CA British Columbia Provincial (Canada, 3/2025)** STEL 15 minutes: 1000 ppm. **CA Ontario Provincial (Canada, 6/2019)** STEL 15 minutes: 1000 ppm. **CA Quebec Provincial (Canada, 2/2024)** C3. STEV 15 minutes: 1000 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 1000 ppm. OEL 8 hours: 1880 mg/m³.
ethanediol	**CA Saskatchewan Provincial (Canada, 4/2021)** CEIL: 100 mg/m³. Form: aerosol. **CA British Columbia Provincial (Canada, 3/2025)** Notes: No British Columbia exposure limit at this time for inhalable aerosol TWA 8 hours: 10 mg/m³. Form: total, Aerosol. STEL 15 minutes: 20 mg/m³. Form: total, Aerosol. C: 100 mg/m³. Form: total, Aerosol. C: 50 ppm. Form: vapour. **CA Ontario Provincial (Canada, 6/2019)** Ceiling Limit: 10 mg/m³. Form: inhalable particulate matter, aerosol only. STEL 15 minutes: 50 ppm. Form: vapour fraction. TWA 8 hours: 25 ppm. Form: vapour fraction. **CA Quebec Provincial (Canada, 2/2024)** C: 50 ppm. Form: vapour and mist. C: 127 mg/m³. Form: vapour and mist. **CA Alberta Provincial (Canada, 3/2023)** C: 100 mg/m³.
Isopropyl alcohol	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm. **CA British Columbia Provincial (Canada, 3/2025)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 200 ppm.

Section 8. Exposure controls/personal protection

	STEV 15 minutes: 400 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 15 minutes: 984 mg/m³. OEL 8 hours: 200 ppm. OEL 15 minutes: 400 ppm. OEL 8 hours: 492 mg/m³.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Nitrile gloves.
Breakthrough time: 240 minutes
thickness: 0.5 mm

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Gas filter type A2.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Blue.

Odor : Alcohol.

Odor threshold : Not available.

Melting point and freezing point : -112°C (-169.6°F)

Boiling point or initial boiling point and boiling range : 85°C (185°F)

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit or lower and upper flammability limit : Lower: 2%
Upper: 12%

Flash point : Closed cup: 12°C (53.6°F)

Auto-ignition temperature :

Ingredient name	°C	°F	Method
ethanediol	398	748.4	

Decomposition temperature : Not available.

pH : 7.9

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): 7.3 mm^2/s (7.3 cSt)
Kinematic (40°C (104°F)): Not available.

Solubility(ies) :

Media	Result
water	Soluble

Miscible with water : Yes.

Partition coefficient — n-octanol/water (logarithmic value) : Not applicable.

Vapor pressure :

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
ethanol	42.94865	5.7				

Density : 0.82 g/cm^3

Relative density : 0.82

Relative vapor density : Not available.

Particle characteristics

Section 9. Physical and chemical properties

Median particle size : Not applicable.

Other information

Physical/chemical properties comments : No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
ethanol	**Rat - Male, Female - Oral - LD50** 10470 mg/kg	OECD 401 [Acute Oral Toxicity]
	Rabbit - Dermal - LD50 >2000 mg/kg	OECD 402 [Acute Dermal Toxicity]
	Rat - Inhalation - LC50 Vapor 51 mg/l [4 hours]	OECD 403 [Acute Inhalation Toxicity]
ethanediol	**Mouse - Dermal - LD50** 3500 mg/kg	
	Rat - Oral - LD50 4700 mg/kg	
Isopropyl alcohol	**Rat - Oral - LD50** 5840 mg/kg	OECD 401 [Acute Oral Toxicity]
	Rabbit - Dermal - LD50 13900 mg/kg	OECD 402 [Acute Dermal Toxicity]
	Rat - Inhalation - LC50 Vapor 72.2 mg/l [4 hours]	

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result

Section 11. Toxicological information

ethanol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 400 mg
ethanediol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 555 mg
Isopropyl alcohol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
Isopropyl alcohol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 mg **Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 10 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
ethanediol	-	-	A4
Isopropyl alcohol	3	-	A4

Section 11. Toxicological information

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
ethanol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
ethanediol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Isopropyl alcohol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
ethanediol	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) (oral) - Category 2
Isopropyl alcohol	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
DP-LUBRICANT BLUE	3728.6	3208.0	N/A	N/A	N/A
ethanol	10470	2500	N/A	51	N/A
ethanediol	500	N/A	N/A	N/A	N/A
Isopropyl alcohol	5840	13900	N/A	72.2	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	
ethanol	**Acute - LC50 - Marine water** Fish - Bleak - *Alburnus alburnus* Size: 8 to 10 cm 11 g/l [96 hours]	Effect: Mortality
	Chronic - NOEC - Marine water Algae - Green algae - *Ulva pertusa* 4.995 mg/l [96 hours]	Effect: Reproduction
	Chronic - NOEC - Fresh water Daphnia - Water flea - *Daphnia magna* - Neonate Age: <24 hours 100 µl/l [21 days]	Effect: Mortality
	Acute - LC50 Fish - *Oncorhynchus mykiss* 13000 mg/l [96 hours]	OECD 203 [Fish, Acute Toxicity Test]
	Acute - EC50 Daphnia - *Ceriodaphnia dubia* 5012 mg/l [48 hours]	STDMETH, ASTM and USEPA E 729-80
	Acute - EC50 Algae - *Chlorella vulgaris* 275 mg/l [72 hours]	OECD 201 [Alga, Growth Inhibition Test]
	Acute - EC10 Algae - *Chlorella vulgaris* 11.5 mg/l [72 hours]	OECD 201 [Alga, Growth Inhibition Test]
	Acute - EC50 Micro-organism 5800 mg/l [4 hours]	
ethanediol	**Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: ≤7 days 8050 mg/l [96 hours]	Effect: Mortality
	Acute - LC50 - Fresh water Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate 6900 mg/l [48 hours]	Effect: Mortality
	Acute - EC50 Daphnia - *Daphnia magna* 41100 mg/l [48 hours]	
Isopropyl alcohol	**Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 31 days; Size: 20.6 mm; Weight: 0.117 g 9640 mg/l [96 hours]	Effect: Mortality
	Acute - EC50 Algae - *Scenedesmus subspicatus* >100 mg/l [72 hours]	

Conclusion/Summary [Product] : Not available.

Section 12. Ecological information

Persistence and degradability

Product/ingredient name	Result	
ethanol	97% [28 days] - Readily	OECD 301B [Ready Biodegradability - CO_2 Evolution Test]
ethanediol	90 to 100% [10 days] - Readily	OECD 301A [Ready Biodegradability - DOC Die-Away Test]
Isopropyl alcohol	**Aerobic** 53% [5 days] - Readily	

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
DP-LUBRICANT BLUE	-	-	Readily
ethanol	-	-	Readily
ethanediol	-	-	Readily
Isopropyl alcohol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanol	-0.35	0.66	Low
ethanediol	-1.36	-	Low
Isopropyl alcohol	0.05	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	IMDG	IATA
UN number	UN1987	UN1987	UN1987	UN1987
UN proper shipping name	ALCOHOLS, N.O.S. (ethanol, Isopropyl alcohol)	Alcohols, n.o.s.	ALCOHOLS, N.O.S. (ethanol, Isopropyl alcohol)	Alcohols, n.o.s. (ethanol, Isopropyl alcohol)
Transport hazard class(es)	3	3	3	3
Packing group	II	II	II	II
Environmental hazards	No.	No.	No.	No.

Additional information

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 5
Special provisions 16, 150

DOT Classification : **Reportable quantity** 37285.6 lbs / 16927.7 kg [5453.4 gal / 20643.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 4b, 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
Special provisions 172, IB2, T7, TP1, TP8, TP28

IMDG : **Emergency schedules** F-E, S-D
Special provisions 274

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A3, A180

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: ethanol; ethylene glycol; isopropyl alcohol

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Section 15. Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

Date of issue/Date of revision	:	20/03/2026
Date of previous issue	:	13/01/2025
Version	:	4
Prepared by	:	Sphera Solutions
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor DOT = Department of Transportation GHS = Globally Harmonized System of Classification and Labelling of Chemicals HPR = Hazardous Products Regulations IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
EYE IRRITATION - Category 2A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
Health Hazards Not Otherwise Classified - Category 1	Calculation method

References : HPR = Hazardous Products Regulations

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.