

Safety Data Sheet
Liquid Surface Cleaner - 70%
ALCOHOL



AEROCHEM

1. Identification

Product identifier	Liquid Surface Cleaner - 70% ALCOHOL
Product code	FLSANIS70500ML, FLSANIS703.78L, FLSANIS7020L, FLSANIS70208L
Other means of identification	None.
Recommended use of the chemical and restrictions on use	Liquid surface cleaner. Not recommended for any other use not detailed on product data sheet or label.
Manufacturer	AEROCHEM Inc. 5977 Trans Canada Highway Pointe-Claire, QC H9R 1C1 Canada General Information: 1-888-592-5837 www.aerochem.ca info@aerochem.ca
Emergency phone number	INFOTRAC®: 1-800-535-5053 International call collect: 1-352-323-3500 24 hours/day, 7 days/week

2. Hazard identification

Summary	Flammable liquid. Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapors and aerosols. Do not ingest. If medical advice is needed, have this SDS or label at hand. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
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WHMIS 2015/GHS/OSHA HCS 2012



Flammable liquids (Category 3)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2)

WARNING

H226: Flammable liquid and vapour

H319: Causes serious eye irritation

H315: Causes skin irritation

P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.

P240: Ground or bond container and receiving equipment.

P241: Use explosion-proof electrical equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P264: Wash skin thoroughly after handling.

P280: Wear protective gloves, protective clothing and eye protection.

P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P332+313: If skin irritation occurs: Get medical advice or attention.

P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists: Get medical advice or attention.
 P362+364: Take off contaminated clothing and wash before reuse.
 P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
 P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.

3. Composition/information on ingredients

Common name	CAS	Weight % content
Ethyl alcohol	64-17-5	60 - 80 %
Isopropyl alcohol	67-63-0	3 - 7 %
Ethyl acetate	141-78-6	1 - 5 %
2-Butoxyethanol	111-76-2	1 - 5 %

Note: The manufacturer withholds the actual concentration range of the ingredients as a trade secret.

4. First-aid measures

Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
Skin contact	Flush with water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.
Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses if easy to do. Flush with water for at least 15 minutes. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with plenty of water. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	No additional information.
Symptoms	May cause redness, tearing, and eye irritation. May cause dry skin and irritation. May cause slight irritation of the respiratory system. Prolonged exposure may cause headache, dizziness and nausea.
Notes to the physician	If gastric 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.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemicals, water fog, alcohol resistant foam, carbon dioxide (CO ₂). Do not use a heavy water jet.
Specific hazards arising from the chemical	Highly flammable liquid and vapour. May be ignited by heat, sparks, flame or static electricity. Vapours are heavier than air and may travel to an ignition source distant from the material handling point.
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	Use water spray to cool fire-exposed containers. Water may be ineffective to extinguish a fire, because mixtures of alcohol and water are also flammable. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

6. Accidental release measures


Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry into sewers, closed areas and release to the environment. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	Ventilate the area well. Remove sources of ignition. Stop leak, if it's possible to do so without risk. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Use non-sparking and antistatic tools. Never return the spilled product into its original container for reuse. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Keep away from heat, sparks and open flame. Use non-sparking and antistatic tools. Ground/bond all containers when transferring large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Avoid contact with skin, eyes and clothing. Do not breathe vapors and aerosols. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep only the quantities necessary for the work being performed in the work area. Keep containers tightly closed when not in use. Do not eat, do not drink and do not smoke during use. After use, wash hands with soap and water. Wash contaminated clothing before reuse.
Conditions for safe storage, including any incompatibilities	Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Ground or bond large containers. Store tightly closed and in properly labelled containers in a cool, dry and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10). Keep away from direct sunlight and heat.
Storage temperature	<30°C (86°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	Ethyl alcohol: 3300 ppm. Isopropyl alcohol: 2000 ppm. 2-Butoxyethanol: 700 ppm. Ethyl acetate: 2000 ppm.		
Ethyl alcohol	STEL	1000 ppm	ACGIH , BC, ON
	TWA (8h)	1000 ppm	1880 mg/m ³ RSST
Isopropyl alcohol	STEL	400 ppm	ACGIH , BC, ON
		500 ppm	1230 mg/m ³ RSST
	TWA (8h)	200 ppm	ACGIH , BC, ON
Ethyl acetate		400 ppm	983 mg/m ³ RSST
	TWA (8h)	150 ppm	BC
		400 ppm	ACGIH , ON
		400 ppm	1440 mg/m ³ RSST
2-Butoxyethanol	TWA (8h)	20 ppm	ACGIH , BC, ON
		20 ppm	97 mg/m ³ RSST
Appropriate engineering controls	Provide sufficient mechanical ventilation (general or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits.		

Individual protection measures	
Eye	Wear safety glasses with side shields. If there is a risk of contact with eyes, wear chemical splash goggles.
Hands	Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear nitrile or neoprene gloves. Be aware that the liquid may penetrate the gloves. Therefore, change gloves when worn. Disposable nitrile gloves can also be used, but discard after single use. Gloves must only be worn on clean hands.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. If necessary, wear an apron or long-sleeve protective coverall suit.
Respiratory	Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times of exposure limit, wear a half mask respirator with organic vapour cartridges. For an APF until maximum 100 times of exposure limit, wear a full face mask respirator with organic vapour cartridges.
Feet	Wear rubber boots to clean up a spill.
 Goggles Nitrile gloves Lab coat	

9. Physical and chemical properties

Physical state	Liquid	Flammability	Flammable.
Colour	Transparent	Flammability limits	2 to 19%
Odour	Light Lemon Scent	Flash point	23.5°C (74.3°F) Tag Closed Cup tester
Odour threshold	0.1 to 49 ppm	Auto-ignition temperature	363 to 425°C (685.4 to 797°F)
pH	6.7	Sensibility to electrostatic charges	Yes
Melting point	<-30°C (-22°F)	Sensibility to sparks and/or friction	No
Freezing point	<-30°C (-22°F)	Vapour density	>1 (Air = 1)
Boiling point	77 to 79°C (170.6 to 174.2°F)	Relative density	0.855 kg/L (Water = 1)
Solubility	Soluble in water.	Partition coefficient n-octanol/water	<1
Evaporation rate	> Butyl Acetate	Decomposition temperature	N/Av.
Vapour pressure	2.4 to 6kPa (18 to 45 mm Hg) @ 20°C (68°F)	Viscosity	N/Av.
Percent Volatile	100%	Molecular mass	N/Av.

N/Av.: Not Available N/Av.: Not Applicable Und.: Undetermined N/E: Not Established

10. Stability and reactivity

Reactivity	No reactivity expected.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Avoid heat, flame and sparks. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates), strong reducing agents (e.g. potassium, sodium, lithium, metal hydrides), isocyanates.
Hazardous decomposition products	No decomposition product.

11. Toxicological information


Numerical measures of toxicity	<table border="0"> <tr> <td rowspan="3">Ethyl alcohol</td> <td>Ingestion</td> <td>7060 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td>Inhalation</td> <td>39 mg/l/4h</td> <td>Mouse</td> <td>LC50</td> </tr> <tr> <td>Skin</td> <td>20000 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> <tr> <td rowspan="4">Isopropyl alcohol</td> <td>Ingestion</td> <td>5045 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td></td> <td>3600 mg/kg</td> <td>Mouse</td> <td>LD50</td> </tr> <tr> <td>Inhalation</td> <td>66.1 mg/l/4h</td> <td>Rat</td> <td>LC50</td> </tr> <tr> <td>Skin</td> <td>6280 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td rowspan="3">Ethyl acetate</td> <td>Ingestion</td> <td>5620 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td>Inhalation</td> <td>38.2 mg/l/4h</td> <td>Mouse</td> <td>LC50</td> </tr> <tr> <td>Skin</td> <td>>18000 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> <tr> <td rowspan="5">2-Butoxyethanol</td> <td>Ingestion</td> <td>560 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td>Inhalation</td> <td>2.38 mg/l/4h</td> <td>Rat</td> <td>LC50</td> </tr> <tr> <td>Skin</td> <td>>2000 mg/kg</td> <td>Guinea pig</td> <td>LD50</td> </tr> <tr> <td></td> <td>400 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> <tr> <td></td> <td>>2000 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> </table>	Ethyl alcohol	Ingestion	7060 mg/kg	Rat	LD50	Inhalation	39 mg/l/4h	Mouse	LC50	Skin	20000 mg/kg	Rabbit	LD50	Isopropyl alcohol	Ingestion	5045 mg/kg	Rat	LD50		3600 mg/kg	Mouse	LD50	Inhalation	66.1 mg/l/4h	Rat	LC50	Skin	6280 mg/kg	Rat	LD50	Ethyl acetate	Ingestion	5620 mg/kg	Rat	LD50	Inhalation	38.2 mg/l/4h	Mouse	LC50	Skin	>18000 mg/kg	Rabbit	LD50	2-Butoxyethanol	Ingestion	560 mg/kg	Rat	LD50	Inhalation	2.38 mg/l/4h	Rat	LC50	Skin	>2000 mg/kg	Guinea pig	LD50		400 mg/kg	Rabbit	LD50		>2000 mg/kg	Rat	LD50
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Likely routes of exposure	Skin, eyes, inhalation, ingestion.																																																																
Delayed, immediate and chronic effects	<p>Eye contact May cause itching, redness and skin irritation. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with each ingredient of this mixture gave not irritating to irritating results.</p> <p>Skin contact May cause dry skin and irritation. Prolonged and repeated contact may cause dry skin, irritation or dermatitis. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient of this mixture gave not irritating to irritating results.</p> <p>Inhalation In the workplace, the product is rapidly absorbed by respiratory tract. May cause slight irritation of the respiratory system. Prolonged exposure may cause headache, dizziness and nausea. The severity of symptoms may vary depending on exposure conditions.</p> <p>Ingestion The ingestion of ethanol can cause euphoria, sensations of drunkenness followed by a depression of the central nervous system which can be manifested by headaches, nausea, dizziness, incoordination, blurred speech, mental confusion and narcosis.</p> <p>Respiratory or skin sensitization Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.</p> <p>IARC/NTP Classification No ingredients listed.</p> <p>Carcinogenicity Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA. Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen.</p>																																																																

	<p>Mutagenicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects.</p> <p>Reproductive toxicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause reproduction effects.</p> <p>Specific target organ toxicity - single exposure No target organ is listed.</p> <p>Specific target organ toxicity - repeated exposure No target organ is listed.</p>
Interactive effects	No information available.
Other information	The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimates (ATE) by inhalation of the mixture were calculated to be greater than 20 mg/L/4h for vapours and to be greater than 5 mg/L/4h for the aerosols and mists. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.

12. Ecological information

Ecological toxicity	<p>Fish - Pimephales promelas [flow-through] LC50 13400 mg/L; 96 h (CAS no 64-17-5)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 9268 mg/L; 48 h (CAS no 64-17-5)</p> <p>Aquatic Plant - Algea, Chlorella vulgaris EC50 275 mg/L; 72 h (CAS no 64-17-5)</p> <p>Fish - Fathead minnow, Pimephales promelas - fresh water LC50 9640 mg/L; 96 h (CAS no 67-63-0)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 3644 mg/L; 48 h (CAS no 67-63-0)</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 1474 mg/L; 96 h (CAS no 111-76-2)</p> <p>Aquatic Invertebrate - Daphnia magna (Water flea) LC50 1550 mg/L; 48 h (CAS no 111-76-2)</p> <p>Algea, Pseudokirchneriella subcapitata EC50 1840 mg/L; 72 h (CAS no 111-76-2)</p> <p>Fish - Pimephales promelas - Fresh water LC50 220 mg/L; 96 h (CAS no 141-78-6)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 560 mg/L; 48 h (CAS no 141-78-6)</p>
Persistence	Not persistent in environment.
Degradability	The product is a mixture whose ingredients are readily biodegradable (> 60% in 28 days).
Bioaccumulative potential	The product is a mixture of which all ingredients have a low bioaccumulation potential (Log Kow of <3 and / or BCF <500).
Mobility in soil	The product is a mixture of which some ingredients evaporate very easily from the surface of the soil. Moreover, ingredients have very high mobility in soil.
Other adverse effects	This chemical does not deplete the ozone layer.


13. Disposal considerations

<p>Container</p> 	<p>Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Organic solvents and wastes residues can be reprocessed (recycle) where there is a recovery program. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.</p>
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- TSCA: Toxic Substance Control Act
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances
- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals
- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances
- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant
- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants
- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention
- CWA 311: Clean Water Act - List of Hazardous Substances
- CWA Priority: Clean Water Act - Priority Pollutant list

California Proposition 65

Common name	CAS	Cancer	Reproductive and Developmental Toxicity
Ethyl alcohol	64-17-5	X	X

Other regulations	<p>- California Proposition 65: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm. Ethyl alcohol in alcoholic beverages, Contains ingredients that can cause cancer according to the state of California. Ethyl alcohol in alcoholic beverages,</p>							
	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>HMIS</p> <table border="1" style="border-collapse: collapse; width: 100px;"> <tr><td style="background-color: blue; color: white; text-align: center;">●</td><td style="color: blue;">Health</td></tr> <tr><td style="background-color: red; color: white; text-align: center;">●</td><td style="color: red;">Flamability</td></tr> <tr><td style="background-color: yellow; text-align: center;">○</td><td style="color: yellow;">Reactivity</td></tr> <tr><td style="text-align: center;">○</td><td>Protective Equipment</td></tr> </table> </div> <div style="text-align: center;"> <p>NFPA</p>  </div> </div>	●	Health	●	Flamability	○	Reactivity	○
●	Health							
●	Flamability							
○	Reactivity							
○	Protective Equipment							

16. Other information

Date (YYYY-MM-DD)	AEROCHEM Inc. 2020-03-18
Version	01
Other information	<p>REFERENCES:</p> <ul style="list-style-type: none"> - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, https://haz-map.com/ - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html - The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National Library of Medicine, https://pubchem.ncbi.nlm.nih.gov/ <p>ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages WHMIS: Workplace Hazardous Materials Information System</p>

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TM/MD

