



Safety Data Sheet

Issue Date: 24-Aug-2014

Revision Date: 27-Oct-2021

Version 2

1. IDENTIFICATION

Product Identifier

Product Name Lift-Off E-188 Concentrate

Other means of identification

SDS # ALLCLR-001

Recommended use of the chemical and restrictions on use

Recommended Use Aircraft deicer.

Details of the supplier of the safety data sheet

Supplier Address

AllClear Systems, LLC
655 Conshohocken Road, Suite 301
Conshohocken, PA 19428
Ph: 484-567-0680

Emergency Telephone Number

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear, orange liquid

Physical State Liquid

Odor None

Classification

Acute toxicity - Oral	Category 4
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word

Warning

Hazard Statements

Harmful if swallowed
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ethylene glycol	107-21-1	60-100
<p>**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**</p>		

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.
Inhalation	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.
Ingestion	If swallowed, do not induce vomiting except at the direction of medical personnel. Rinse mouth. Drink 1 or 2 glasses of water. Get medical attention immediately.

Most important symptoms and effects

Symptoms	May cause eye and skin irritation. May cause nausea, vomiting, stomach ache, and diarrhea.
-----------------	--

Indication of any immediate medical attention and special treatment needed

Notes to Physician	May aggravate pre-existing skin disorders.
---------------------------	--

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water, foam, carbon dioxide, dry powder.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

The product may become combustible after prolonged heating at the boiling point.

Hazardous Combustion Products Carbon oxides.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Ventilate affected area.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an inert (i.e. vermiculite, dry sand or earth) absorbent material.
Methods for Clean-Up	Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.
Prevention of Secondary Hazards	Material can create slippery conditions.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Follow all SDS/label precautions even after container is emptied, because it may retain product residues. Do not breathe vapors or spray mist. Do not eat, drink or smoke when handling this product.
--------------------------------	---

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from incompatible materials.
Packaging Materials	Empty containers retain product residue and can be hazardous.
Incompatible Materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol 107-21-1	Ceiling: 100 mg/m ³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear eye protection if splashing is possible.

Skin and Body Protection Chemical impervious gloves. Boots, aprons needed for protection against spill / splashes.

Respiratory Protection Not usually necessary under conditions of normal use. In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Wash contaminated clothing before reuse. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Liquid	Odor	None
Appearance	Clear, orange liquid	Odor Threshold	Not determined
Color	Clear orange		
Property	Values	Remarks • Method	
pH	7.90-8.80		
Melting Point/Freezing Point	100% Below -70°C 75% v/v -60°C 50% v/v -28 °C		
Boiling Point/Boiling Range	> 100 °C / > 212 °F		
Flash Point	> 100 °C / > 212 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Liquid-not applicable		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	10 mmHg	@ 68°F (20 ° C)	
Vapor Density	1.5 (estimated)	(Air=1)	
Specific Gravity	1.104	@ 20°C (68°F)	
Water Solubility	Completely miscible		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	> 250 °C / > 482 °F		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not an explosive		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources. Keep separated from incompatible substances.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Incomplete combustion may produce Carbon Monoxide and other harmful gases.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact May cause temporary irritation on eye contact.

Skin Contact May cause temporary irritation on skin contact.

Inhalation Avoid breathing vapors or mists.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene glycol 107-21-1	4000 - 10200 mg/kg (Rat)	= 9530 µL/kg (Rabbit) = 10600 mg/kg (Rat)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity Based on the information provided, this product does not contain anycarcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	46300: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Ethylene glycol 107-21-1	-1.93

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

- Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
- DOT** Not Regulated (Single Container < RQ)
- Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
- Hazard Class** 9
- Packing Group** III
- Reportable Quantity (RQ)** 5000 lbs
- IATA** Not regulated
- IMDG** Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ethylene glycol	Present	X		Present		Present	X	Present	X	X

Legend:

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

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

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ethylene glycol - 107-21-1	107-21-1	60-100	1.0

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene glycol 107-21-1	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards**
Not determined**Flammability**
Not determined**Instability**
Not determined**Special Hazards**
Not determined**HMS****Health Hazards**
Not determined**Flammability**
Not determined**Physical Hazards**
Not determined**Personal Protection**
Not determined

Issue Date: 24-Aug-2014
Revision Date: 27-Oct-2021
Revision Note: Reviewed

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.

End of Safety Data Sheet