



SAFETY DATA SHEET

FCL-X Pro, FCL-X Pro Max (Liquid in Extinguisher)

Standard: Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2024)

Document Date: 09/16/2026 | **Version:** 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Trade Name: FCL-X Pro, FCL-X Pro Max

Product Type: Pressurized Liquid (Extinguishing Agent)

1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses: Extinguishing agent designed to extinguish lithium-ion battery fires and/or thermal runaways.

Uses Advised Against: Not for use outside of the original UL/DOT-rated pressurized extinguisher cylinder; do not decant, transfer, or use as a bulk or immersion liquid.

1.3. Details of the Supplier of the Safety Data Sheet

Company Name: FCL

Address: 345 Industrial Park Boulevard, Nahunta, GA 31553, United States

Telephone: 912.462.2084

Website: <https://fcl-x.com/>

Contact Person / Phone: FCL-X On Call (912.580.9128)

1.4. Emergency Telephone Number

Emergency Phone: 912.580.9128

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

2.1. Classification of the Substance or Mixture

Gases Under Pressure (Liquefied Gas) — H280; contains gas under pressure; may explode if heated

Serious Eye Damage / Eye Irritation (Category 2) — H319; causes serious eye irritation

Carcinogenicity (Category 1B) — H350; may cause cancer

Causes eye irritation

Causes mild skin irritation

2.2. Label Elements



Signal Word: DANGER

Hazard Statements:

H280: Contains gas under pressure; may explode if heated.

H319: Causes serious eye irritation.

H350: May cause cancer.

Precautionary Statements:

General:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

Prevention:

P201: Obtain special instructions before use.

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

P264: Wash hands thoroughly after handling.

P280: Wear eye protection/face protection/protective gloves.

Response:

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313: IF exposed or concerned: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

Storage:

P410 + P403: Protect from sunlight. Store in a well-ventilated place.

**Disposal:**

P501: Dispose of contents/container in accordance with local regulations.

Hazards Not Otherwise Classified (HNOC):

Causes eye irritation.

Causes mild skin irritation.

May be harmful if swallowed.

May be harmful if inhaled.

Additional Labelling: Restricted to professional users.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances: Not applicable. This product is a mixture.

3.2. Mixtures:

Chemical / Component Name	CAS Number	Weight % (w/w)	Classification (GHS / OSHA HCS)
Potassium acetate	127-08-2	<1 – 30%	Skin Irrit. 2 (H315), Eye Irrit. 2 (H319), STOT SE 3 (H335)
Erythritol	149-32-6	1 – 10%	N/A
Lithium carbonate	554-13-2	1 – 5%	Acute Tox. 4 (H302), Skin Irrit. 2 (H315), Eye Dam. 1 (H318), STOT SE 3 (H335), Repr. 1B (H360), STOT RE 1 (H372)
Citric Acid	77-92-9	<0.1 – 1.5%	N/A

Note on Confidentiality: Where the concentration of an ingredient is expressed as a range, the exact percentage has been withheld as a trade secret.

SECTION 4: FIRST-AID MEASURES

4.1. Description of First Aid Measures

General Information: If breathing is irregular, or in cases of drowsiness, loss of consciousness, or cramps: Call 911 immediately and provide first aid. Contact a physician if symptoms persist. Never give fluids to an unconscious person.

Inhalation: If breathing difficulty or irritation of respiratory tract: Bring the exposed person to fresh air and stay with them.

Skin Contact: Remove contaminated clothing and footwear immediately. Wash exposed skin thoroughly with soap and water. Do NOT use solvents or thinners.

Eye Contact: Flush eyes immediately with copious amounts of water or isotonic saline (20–30 °C) for at least 5 minutes. Remove contact lenses. Continue flushing during transport to medical care.

Ingestion: If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns: Not applicable.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Irritation Effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned: Get immediate medical advice/attention.

Information to medics: Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

This material is not combustible or flammable.

5.2. Special Hazards Arising from the Substance / Mixture

This material is not combustible or flammable.

Because the agent is stored under pressure, the extinguisher cylinder may rupture violently if involved in or exposed to external fire; evacuate the area and cool the cylinder from a protected position if it can be done safely.



Decomposition products produced under high temperatures/fire include: Carbon oxides (CO / CO₂).

5.3 Advice for Firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact.

Upon direct exposure, contact the Poison Help Line on 1-800-222-1222 (24/7) to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid direct contact with spilled substances. Spilled material may create slippery surfaces. Wear appropriate PPE (Section 8).

6.2. Environmental Precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of spills or leaks to the surroundings, contact local environmental authorities.

6.3. Methods and Material for Containment and Cleaning Up

Collect spills carefully. If dried, moisten the collection material with water in order to prevent the formation and propagation of dust.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to Other Sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for Safe Storage, including any incompatibilities

Storage Conditions: Store in a dry, cool, well-ventilated location, locked up. Protect cylinders from physical damage and puncture. Store and transport upright position. Do not expose to temperatures exceeding manufacturer's rated limits. A sign



warning of toxic materials shall be affixed to the room and cupboard containing the product(s).

Incompatible Materials: Strong acids, strong bases, strong oxidizing agents, strong reducing agents.

Packaging Material: Keep in original UL/DOT-rated cylinder container.

7.3. Specific End Use(s)

For lithium-ion battery fire suppression as specified in Section 1.2.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control Parameters

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1).

8.2. Exposure Controls

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures: Do not recirculate outlet air that contain the substances. Apply standard precautions during use of the product. Avoid inhalation of gas or dust. Airborne gas and dust concentrations must be kept at a minimum. Provide efficient mechanical ventilation. If not possible use suitable respiratory equipment.

Hygiene measures: Wash all exposed body areas thoroughly between uses and at the end of the workday. Pay special attention to hands, forearms, and face.

8.3 Individual protection measures, such as personal protective equipment

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment: Type: EN 149

Skin protection: No specific requirements. During discharge, rapid gas expansion may cause localized cooling of exposed surfaces; avoid direct skin contact with the discharge stream to prevent cold-contact injury (frostbite). Insulated or cold-rated gloves are recommended where prolonged or repeated discharge is expected.

Hand protection: Chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride, (Pylox), butyl rubber.



Eye protection: Chemical safety goggles are recommended if contact is possible.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Basic Physical and Chemical Properties

Physical State: Liquid (under pressure)

Color: Green hue

Odor: None

Odor Threshold: No data available

pH: 6-9

Density: No data available

Melting / Freezing Point: No data available

Boiling Point / Range: No data available

Decomposition Temperature: Not applicable

Flash Point: Not applicable

Flammability: The material is not combustible

Evaporation Rate: Not applicable

Explosive Limits (% v/v): Not applicable

Vapor Pressure: No data available

Relative Vapor Density: No data available

Relative Density: No data available

Solubility: Soluble in water

Partition Coefficient (n-octanol/water): No data available

Auto-ignition Temperature: Not applicable

Decomposition Temperature: Not applicable

Kinematic Viscosity: No data available

Particle Characteristics: Not applicable (liquid)

9.2. Other Information

Sensitivity to Shock: No

Oxidizing Properties: Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Non-reactive under recommended storage conditions.

10.2. Chemical Stability: Stable under recommended storage conditions.

10.3. Possibility of Hazardous Reactions: None known under foreseeable emergencies.

10.4. Conditions to Avoid: Do not expose the cylinder to temperatures above the manufacturer's rated storage/service temperature; excessive heat can cause internal pressure buildup and cylinder rupture.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizing agents, strong reducing agents.

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Toxicological Effects

Acute toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory sensitization: Based on available data, the classification criteria are not met.

Skin sensitization: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: May cause cancer.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: Based on available data, the classification criteria are not met.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Long term effects



Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Product/substance: FCL-X Pro FCL-X Pro Max

Species: Ceriodaphnia dubia | *Compartment:* Freshwater | *Duration:* 48 hours |
Test: LC50 | *Result:* 17.68 g/L

Species: Pimephales promelas | *Compartment:* Freshwater | *Duration:* 96 hours |
Result: 8.15 g/L

Classification: Based on available data, the classification criteria are not met.

12.2. Persistence and Degradability:

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative Potential:

Based on available data, the classification criteria are not met.

12.4. Mobility in Soil:

No data available.

12.5. PBT and vPvB Assessment:

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other Adverse Effects:

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Dispose of all waste product and containers in accordance with federal, state and local regulations.

RCRA Hazardous Waste ("P" and "U" list) (40 CFR 261): None of the components are listed.

Specific Labelling / Contaminated Packaging: Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

Mode	14.1 UN/ID	14.2 UN Proper Shipping Name	14.3 Hazard Class(es)	14.4 Packing Group (PG)	14.5 Environmental Hazards (Env)
US DOT	UN1044	Fire extinguishers	2.2 (Non-Flammable Gas)	N/A	No
IMDG	UN1044	Fire extinguishers	2.2 (Non-Flammable Gas)	N/A	No
IATA	UN1044	Fire extinguishers	2.2 (Non-Flammable Gas)	N/A	No

Special Precautions: Transport cylinders securely in upright position. Limited quantity provisions may apply per 49 CFR 173.309.

Additional Information: UN1044, Fire extinguishers, Class 2.2 (Non-Flammable Gas) per 49 CFR 172.101; confirm final DOT/IATA/IMDG classification, packing instructions, and any applicable limited-quantity exception (49 CFR 173.309) against the specific propellant gas and cylinder rating used.

Transport in bulk according to IMO instruments: No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture

15.2. US Federal Regulations

TSCA (the non-confidential portion): None of the components are listed

Clean Air Act: None of the components are listed

EPCRA Section 302: None of the components are listed

EPCRA Section 304: None of the components are listed



EPCRA Section 313:

None of the components are listed

CERCLA:

None of the components are listed

Hazardous chemical inventory reporting: This product contains substances that may cause endocrine disruption in humans

15.3. US State Regulations

California / Prop. 65:

Contains lithium carbonate

Massachusetts / Right To Know Act:

None of the components are listed

New Jersey / Right To Know Act:

Contains lithium carbonate

New York / Right To Know Act:

None of the components are listed

Pennsylvania / Right To Know Act:

None of the components are listed

15.4. NFPA Rating

Health: 2 | Fire Hazard: 0 | Instability Hazard : 0

15.5. Restrictions for Application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.6. Demands for Specific Education

No specific requirements.

15.8. Chemical Safety Assessment

No

15.9. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

Full Text of H-Statements:

H280: Contains gas under pressure; may explode if heated.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.



H350: May cause cancer.

H360: May damage fertility or the unborn child.

H372: Causes damage to organs through prolonged or repeated exposure.

Key Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

DOT = Department of Transportation

EPCRA = Emergency Planning and Community Right-To-Know Act

ACGIH: American Conference of Governmental Industrial Hygienists

DOT: Department of Transportation

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

STOT: Specific Target Organ Toxicity

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative