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Updates: January 20, 2025 (2.2.24,11.1,12.1)

March 31, 2025 (9.1)

Prepared by: Chad Carver

Name of Chemical: FCL-X

Location: 345 Industrial Park Blvd.

Nahunta, GA 31553

## Section 1: Identification

### 1.1 Product Identifier

#### **Product Form**

FCL-X is a water-based proprietary solution that is translucent in color, free-flowing, and lacks any discernible odor.

#### **Product Name**

FCL-X

### 1.2 Intended Use of the Product

#### **Use of the Substance/Mixture**

FCL-X is an extinguishing agent designed to extinguish lithium-ion battery fires and/or thermal runaways. FCL-X is intended to be applied from a pressurized portable extinguisher for optimal performance.

### 1.3 Name, Address, and Telephone of the Responsible Party

Full Circle Lithium  
345 Industrial Park Blvd  
Nahunta, GA 31553

#### **Emergency Telephone Number**

Office: 912.462.2084

## Section 2: Hazards Identification

### 2.1 Classification of the Substance or Mixture:

#### 2.1.1 GHS Classification (EC Regulation 1272/2008 and US OSHA Regulations)

Acute Toxicity: Category 0

Eye Irritant: Category 0

#### 2.2.2 EC: Classification according to 67/548/EEC or 1999/45/EC [DSD/DPD]

Xn, R22, Xi, R36

### 2.2 Label Elements

#### 2.2.3 Hazard Pictogram



#### 2.2.4 Signal Word

Warning

#### **Hazard Statement**

H303: May be harmful if swallowed. Rinse nose, mouth and throat with water.  
Consult a physician.

H320: Causes eye irritation.

#### **Precautionary Statement(s):**

Wear protective gloves/protective clothing/eye protection/face protection.

**P280**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and easy to do. Continue Rinsing.

**P305+P351+P338**

If eye irritation persists, get medical advice/attention.

**P337+P313**

IF SWALLOWED: Rinse mouth. Consult a physician if you feel unwell.

**P301+P312+P330**

## Safety Data Sheet

Wash hands thoroughly after handling.

**P264**

### ***Additional Precautionary Statement(s)***

Do not eat, drink, or smoke when using this product.

**P270**

Dispose of contents/container to an approved waste disposal facility.

**P501**

### **2.3 Other Hazards**

None

## Section 3: Composition/Information on Ingredients

### **3.1 Substance**

Water-based proprietary solution

### **3.2 Mixture (Include percentages & GHS-US classification)**

Water-based proprietary solution

## Section 4: First Aid Measures

### **4.1 Description of First Aid Measures**

Eyes: Flush with water for at least 15 minutes. If irritation occurs and persists, contact a medical doctor.

Skin: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

Ingestion: Drink 1 to 2 glasses of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

## Section 5: Fire Fighting Measures

### **5.1 Extinguishing Media**

Not Applicable

### **5.2 Special Hazards Arising from the Substance or Mixture**

Hazardous Combustion Products:

None

General Hazard:

No known physical hazard, no combustible

## Safety Data Sheet

Properties Contributing to Flammability:	None
Flashpoint:	Not applicable
Flammable limits in the air:	Upper: Not available Lower: Not available
Auto Ignition Temperature:	Not applicable
Sensitivity to Static Charge:	Not applicable
Sensitivity to Static Impact:	Not applicable

### 5.3 Advice for Fire-fighters

Wear full protective clothing and self-contained breathing apparatus (SCBA) for firefighting.

## Section 6: Accidental Release Measures

### 6.1 Personal precautions, protective equipment, and emergency procedures

Before cleanup measures begin, review the entire SDS with particular attention to Section 2, Hazards Identification; Section 8, Exposure Controls/Personal Protection.

### 6.2 Environmental Precautions

Do not wash into drains. Dispose of at a qualified waste disposal facility.

## Section 7: Handling and Storage

### 7.1 Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Use adequate ventilation. Wear safety glasses or goggles and rubber gloves. Wash thoroughly after handling.

### 7.2 Conditions for Safe Storage Including any Incompatibilities

None

## Section 8: Exposure Controls / Personal Protection

### 8.1 Control Parameters

#### Exposure Limits

Chemical Name	EU TWA STEL	EH40 (UK WEL) TWA STEL	USA (ACGIH) TWA STEL/Ceiling	USA (OSHA) PEL STEL/Ceiling
FCL-X	None*	None*	None*	None*

## 8.2 Exposure Controls

### *Personal Protective Equipment*

Eyes and Face: Safety Glasses or goggles

Respiratory: Not Required

Protective Clothing: Gloves (nitrile, neoprene, PVC/rubber (permeation breakthrough not detected during 6-hour test))

Work Hygienic Practices: Quick drench eyewash and safety shower

## Section 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

Appearance:	Translucent aqueous solution
Odor:	Not Discernible
Odor Threshold:	None
pH:	6.5-10.7
Melting Point:	Not Applicable
Boiling Point:	Not Applicable
Flash Point:	Not Applicable
Evaporation Rate:	Not Applicable
Flammability:	Not Applicable
Flammable Limits:	Not Applicable
Vapor Pressure:	Not Applicable
Vapor Density:	Not Applicable
Specific Gravity:	1.0 g/ml
Solubility in Water:	Not Applicable
Partition Coefficient n-octanol/water:	Not Available
Auto-Ignition Temperature:	Not Applicable
Decomposition Temperature:	Not Applicable
Viscosity:	Not Applicable
Explosive Properties:	Not Explosive

Oxidizing Properties:

Not an Oxidizer

**9.2 Other Information**

Self-Reactive Properties:

Does not meet classification criteria

Pyrophoric Properties:

Does not meet classification criteria

Self-heating Properties:

Does not meet classification criteria

Water Reactive Properties:

Does not meet classification criteria

Corrosive to Metals:

Does not meet classification criteria

Molecular Weight:

18.02

**Section 10: Stability and Reactivity****10.1 Reactivity**

Reacts with Acids and Bases

**10.2 Chemical Stability**

Stable

**10.3 Possibility of Hazardous Reaction:**

Hazardous Polymerization will not occur

**10.4 Conditions to Avoid**

Contact with Acid and Bases

**10.5 Incompatible Metals**

Acids and Bases

**10.6 Hazardous Decomposition Products:**

None

**Section 11: Toxicological Information****11.1 Information on Toxicological Effects****a) Acute Toxicity**

Classified as not having acute toxicity basis of the non-water component

## Safety Data Sheet

b) Skin Corrosion/Irritation

Classified as not irritating skin on basis of the non-water component

c) Serious Eye Damage/Irritation

Classified as irritant to eyes on the basis of the non-water component

d) Respiratory/Skin Sensitivity

Classified as not sensitizing to skin on the basis of the non-water component

e) Germ Cell Mutation

Classified as not mutagenic on the basis of the non-water component

f) Carcinogenicity

Classified as non-carcinogenic based on the non-water component

g) Reproductive Toxicity

Classified as not a reproductive toxin based on the non-water component

h) STOT-Single Exposure

Classified as not causing organ damage based on the non-water component

i) STOT- Repeated Exposure

Classified as not causing organ damage on repeat exposure based of the non-water component

j) Aspiration Hazard

Does not present an aspiration hazard

***Acute Effects from Overexposure:***

This product doesn't contain hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

***Chronic Effects from Overexposure:***

This product doesn't contain hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

## 12.1 Toxicity:

The toxicity of Full Circle Lithium product, FCL-X, was evaluated for two aquatic species common to freshwater toxicity test methods. These methods are used by the National Pollutant Discharge Elimination System (NPDES) regulatory program for monitoring discharges of industrial and municipal sources of wastewater in the United States.

One vertebrate species, *Pimephales promelas* (minnow), and one invertebrate species, *Ceriodaphnia dubia* (water flea), were exposed to FCL-X in separate tests using a static nonrenewal procedure.

This report describes the results of toxicity tests conducted at EnviroScience Inc., 5070 Stow Rd., Stow, OH 44224, during the period of December 12-16, 2024, December 31, 2024-January 4, 2025 and January 8-12, 2025. No ecological damage is known or expected in the event of normal use.

Avoid larger spills in soil, water and drains.

Acute endpoints for FCL-X		
	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
	48-hour LC <sub>50</sub>	96-hour LC <sub>50</sub>
FCL-X	17.68 g/L	8.15 g/L

## 12.2 Persistence and Degradability

No data available

## 12.3 Bioaccumulative Potential

Given the biodegradability of the component substances, bioaccumulative potential is not anticipated

## 12.4 Mobility in Soil

No data available for this product

## 12.5 Other Adverse Effects



None

## Section 13: Disposal Considerations

### 13.1 Waste Treatment Methods

Use a qualified industrial waste disposal facility. Dispose of waste according to local and Federal laws and regulations.

## Section 14: Transport Information

14.1 UN Number None

14.2 UN Proper Shipping Name (IMDG, ICAO, ADR, DOT) None

14.3 Transport Hazard Class(es) (IMDG, ICAO, ADR, DOT)

Based on available data, the classification criteria are not met

14.4 Packing Group (IMDG, ICAO, ADR, DOT) None

14.5 Environmental Hazards

Based on available data, the classification criteria are not met

14.6 Special Precautions for User None

14.7 Transport in Bulk according to Annex II of MARPOL 73/78 and IBC Code None