

## **FIRECHIEF 500ML LITH-EX AEROSOL EXTINGUISHER**

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1 Product identifier**

**Product name:** FIRECHIEF 500ML LITH-EX AEROSOL EXTINGUISHER  
**Substance:** The product is not classified according to the CLP/REACH regulations as it is defined as an article.  
**EC No.:** Not Applicable  
**REACH Registration:** Not Applicable  
**CAS No.:** Not Applicable

**1.2 Relevant identified uses of the substance or mixture and uses advised against****Identified uses:**

Fire extinguisher aerosol for Lithium Battery Fires and Class A fires.

**Uses advised against and reason:**

Group I metal fires (Lithium, Sodium, Potassium, et al.) as the aqueous phase will aggravate the fire.

**1.3 Details of the supplier of the safety data sheet**

**Supplier:** Firechief Global  
**Address:** 3 Lands End Way, Oakham, Rutland  
**Postcode / Country:** LE15 6RB / United Kingdom  
**Telephone:** +44(0) 330 999 0019  
**Email:** sales@firechiefglobal.com  
**National Contact:** UKREACHCA@hse.gov.uk

**1.4 Emergency telephone number**

**Contact:** +44(0) 330 999 0019  
**Language:** English  
**Opening hours:** Available Monday to Friday (not bank holidays), 8 am to 5 pm (UK time)

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**

Hazard Class	Hazard Category	Hazard Statement
Aerosol	3	H229 – Pressurised container: may burst if heated.

**2.1.2 Additional Information**

None

**2.2 Label elements****2.2.1 Labelling according Regulation (EC) No 1272/2008 [CLP]:****Hazard Pictogram(s)**

None

**Signal word**

Warning

**Hazard statement(s)**

H229 Pressurized container: may burst if heated.

**Precautionary statement(s)**

P410 + 412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P102 Keep out of reach of children.

**Supplemental Hazard Information**

Not Applicable

**2.3 Other hazards**

The contents of this aerosol do not meet the criteria for PBT or vPvB according to Annex XIII of the REACH regulations.



## SECTION 3: Composition/information on ingredients

**3.1 Substances**

Not Applicable. (See section 3.2)

**3.2 Mixtures**

Chemical Name	EC No.	CAS No.	% Weight	REACH Registration No.	CLP classification according to Regulation (EC) 1272/2008
Vermiculite Dispersion	406-060-8	110638-71-6	79.2 ±1.8	Exempt in accordance with Annex V.7	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Nitrogen	231-783-9	7727-37-9	0.549 ±0.012	Exempt in accordance with Annex IV	Aerosol Category 3 H229 – Pressurized container: may burst if heated
Helium	231-168-5	7440-59-7	0.00413 ±0.00009	Exempt in accordance with Annex IV	Aerosol Category 3 H229 – Pressurized container: may burst if heated

• The mineral Vermiculite (CAS: 1318-00-9) is exempt from REACH registration in accordance with Annex V.7

## SECTION 4: First aid measures

**4.1 Description of first aid measures****4.1.1 General Information:**

No serious adverse effects are anticipated.

If seeking medical advice - show this data sheet to the medical professional.

**4.1.2 Following inhalation:**

If large quantities of aerosol contents are inhaled, remove any exposed person(s) to fresh air; keep warm and at rest. If breathing problems occur administer oxygen or CPR as appropriate. Seek immediate medical attention.

**4.1.3 Following skin contact:**

This material is considered harmless; however, if irritation occurs then wash affected skin with plenty of water. Get medical attention if irritation persists after washing.

**4.1.4 Following eye contact:**

Immediately flush with clean water or eye wash solution, holding the eyelids apart. Seek medical attention if redness, irritation or pain persists.

**4.1.5 Following ingestion:**

There are no known adverse effects for small quantities and hence first aid measures are not usually required. For larger quantities, wash mouth out with water and give water to drink. Do not induce vomiting. If gastrointestinal symptoms occur then seek medical advice.

**4.1.6 Self-protection of the first aider:**

Wear gloves to protect against skin irritation.

**4.2 Most important symptoms and effects, both acute and delayed****4.2.1 General information:**

Significant acute or delayed effects are not anticipated.

**4.2.2 Symptoms and effects:**

Aerosol spray from this product may cause irritation to eyes, nose or throat.

**4.3 Indication of any immediate medical attention and special treatment needed****4.3.1 Specific treatment:**

Treat symptomatically.

**4.3.2 Notes for the doctor:**

No special antidote required.



#### 4.2.2 Symptoms and effects:

Aerosol spray from this product may cause irritation to eyes, nose or throat.

#### 4.3 Indication of any immediate medical attention and special treatment needed

##### 4.3.1 Specific treatment:

Treat symptomatically.

##### 4.3.2 Notes for the doctor:

No special antidote required.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### 5.1.1 General information:

Non-combustible substance; however, packaging and surrounding materials may be combustible.

#### 5.1.2 Suitable extinguishing media:

Use an extinguishing agent suitable for the surrounding fire. AVD aerosols are suitable for use on Class A fires.

#### 5.1.3 Unsuitable extinguishing media:

No product-specific restrictions.

### 5.2 Special hazards arising from the substance or mixture

#### 5.2.1 General information:

Cool any aerosol containers at risk.

Dispose of contaminated extinction water according to official regulations.

#### 5.2.2 Hazardous combustion products:

Not applicable – non-combustible substance.

### 5.3 Advice for firefighters

No specific fire fighting equipment is required.

## SECTION 6: Accidental release measures

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

#### 6.1.1 For non-emergency personnel:

Use personal protective equipment (Section 8) to protect eyes, skin and clothing.

#### 6.1.2 For emergency responders:

Use personal protective equipment, see Section 8.

### 6.2 Environmental precautions

Prevent large quantities of product from entering drains, sewers or watercourses. Protect from wind to prevent airborne dust creation.

### 6.3 Methods and material for containment and cleaning up

#### 6.3.1 For containment:

Clean up spillages promptly to prevent dispersal by local traffic.

Contain spilled aerosol contents by damming with an absorbent, non-combustible material (e.g. vermiculite granules, universal binding agent, sand, diatomaceous earth).

#### 6.3.2 For cleaning up:

Absorb spillages with an absorbent, non-combustible material (e.g. vermiculite granules, universal binding agent, sand, diatomaceous earth), sweep up and shovel.

#### 6.3.3 Disposal and other information:

Dispose of in compliance with local and national regulations.

### 6.4 Reference to other sections

Suitable personal protective equipment is quoted in Section 8. Further information on waste and disposal is given in Section 13.



## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1 Protective Measures:

Ensure adequate ventilation when spraying. Observe directions on label and instructions for use.

Use working methods according to operating instructions.

The extinguishing agent in its dried form is classed as an irritant and appropriate respiratory protection should be worn. Wear appropriate personal protective equipment (see Section 8).

#### 7.1.2 Measures to prevent fire:

This product is non-flammable; no special fire protection measures are necessary.

#### 7.1.3 Measures to prevent aerosol and dust generation:

Where aerosol mist or mechanically generated dust from dried aerosol contents may be generated, use engineering measures (e.g. local dust extraction) to provide effective dust control in order to ensure compliance with the current Occupational Exposure Limits.

#### 7.1.4 Measures to protect the environment:

Avoid disposal of aerosol contents or spillages into the drains as the alkaline binders may affect the pH of the water.

#### 7.1.5 Advice on general occupational hygiene:

Wash hands after use and regularly during use especially if exposed to aerosol contents. In working areas do not eat, drink or smoke when using this product.

Remove contaminated clothing and protective equipment before entering eating areas. Avoid contact with aerosol contents by skin, eyes and clothing.

Wash clothing before reuse

### 7.2 Conditions for storage, including any incompatibilities

#### 7.2.1 Technical measures and storage conditions:

Protect aerosol cans from damage.

#### 7.2.2 Requirements for storage rooms and vessels:

Store in a dry place.

Store between 5 °C and 25 °C, where possible.

Do not store at temperatures below 0 °C or over 50 °C. Do not freeze. Product will not operate if frozen.

Store away from UV sunlight and external temperature variations. Observe applicable local regulations for storage of aerosols.

#### 7.2.3 Further information on storage:

None.

### 7.3 Specific end use(s) Recommendations:

No data available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	CAS No.	Workplace Exposure Limit (EH40/2005)
Vermiculite	1318-00-9	Substance not listed in EH40/2005 For WELs, treat as nuisance dust (section 44) 10 mg m-3 (Inhalable dust) / 4 mg m-3 (Respirable dust)

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls:

Local dust extraction.

#### 8.2.1 Appropriate engineering controls:

Local dust extraction.

#### 8.2.2 Individual protection measures:

Hands: Protective gloves if required and wash hands at the end of each work session.

Eyes: Goggles or mask – no specific type recommended.



Skin: For workers who suffer from dermatitis or sensitive skin, gloves and overalls are recommended.  
 Respiratory: In cases of prolonged exposure to airborne dust or aerosol mists, wear respiratory protective equipment that complies with European or national legislation i.e. Type FFP2.  
 General: Protective overalls. Soiled clothing must be adequately laundered to avoid becoming a dust source.

### 8.2.3 Environmental exposure controls:

Use appropriate engineering controls to prevent dust escaping to the atmosphere.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) <b>Appearance:</b>	AVD(Li) Gold / brown suspension.
b) <b>Odour:</b>	AVD(Li) Slight earthy smell
c) <b>Odour threshold:</b>	No data available
d) <b>pH:</b>	AVD (Li) 7 to 10
e) <b>Melting point/freezing point;</b>	AVD(Li) Freezing point ~0 °C (water)
f) <b>Initial boiling point and boiling range:</b>	AVD(Li) Boiling point ~100 °C (water)
g) <b>Flash point:</b>	Not applicable – Not flammable
h) <b>Evaporation rate:</b>	No data available
i) <b>Flammability (solid, gas):</b>	Not flammable
j) <b>Upper/lower flammability or explosive limits:</b>	No data available
k) <b>Vapour pressure:</b>	No data available
l) <b>Vapour density:</b>	No data available
m) <b>Relative density:</b>	AVD(Li) 1.1 g cm <sup>-3</sup>
n) <b>Solubility(ies):</b>	AVD(Li) is miscible with water.
o) <b>Partition coefficient: n-octanol/water:</b>	No data available
p) <b>Auto-ignition temperature:</b>	No data available
q) <b>Decomposition temperature:</b>	No data available
r) <b>Viscosity:</b>	AVD(Li) <500 cP - Brookfield viscosity [Sp3, 100 rpm]
s) <b>Explosive properties:</b>	Not explosive
t) <b>Oxidising properties:</b>	No data available

### 9.2 Other information

None available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Contents are not likely to react adversely if stored and handled as recommended.

### 10.2 Chemical stability

Chemically stable with proper handling.

### 10.3 Possibility of hazardous reactions

If used as recommended no hazardous reactions are to be expected.

### 10.4 Conditions to avoid

See also section 7.

Pressure increase will result in danger of container bursting.

Pressurised container: Protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

### 10.5 Incompatible materials

No data available.

### 10.6 Hazardous decomposition products

No data available.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

- a) **Acute Toxicity**  
Classification criteria are not met.
- b) **Skin corrosion/irritation**  
No known hazards. Irritation is not anticipated.
- c) **Serious eye damage/irritation**  
Mechanically generated particulate matter may cause irritation.
- d) **Respiratory or skin sensitisation**  
Dust or aerosol mist may cause minor transient respiratory irritation at high concentrations.
- e) **Germ cell mutagenicity**  
No known hazards.
- f) **Carcinogenicity**  
No known hazards
- g) **Reproductive toxicity**  
No known hazards
- h) **STOT-single exposure**  
No known hazards.
- i) **STOT-repeated exposure**  
No known hazards.
- j) **Aspiration hazard**  
No known hazards.

### 11.2 Information on likely routes of exposure

The most likely route for exposure is via skin contact or inhalation of aerosol mist.

### 11.3 Other information

None.

## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

PBT / vPvB assessment not available as chemical safety assessment not required / not conducted. No components are included in the EU candidate list of substances of very high concern (SVHCs).

### 12.6 Other adverse effects

By intended use and observance of regulations / advices for storage and handling no adverse effects are expected.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This product is not classified as hazardous waste under the EC Directive 2008/98/EC or as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No.894.  
Dispose of according to national / regional legislation.



## SECTION 14: Transport information

### 14.1 UN number

1950.

### 14.2 UN proper shipping name

Road - ADR: Aerosols  
Rail - RID: Aerosols  
Sea - IMDG: Aerosols  
Air - IATA: Aerosols, non-flammable.

### 14.3 Transport hazard class(es)

Road - ADR: 2.2  
Classification Code: 5A  
LQ (ADR 2017): 1 litre  
Tunnel Restriction: E  
Rail - RID: 2.2  
Sea - IMDG: 2.2  
EmS: F-D, S-U are assigned to UN1950.  
However, the product is non-flammable, non-toxic and non-corrosive.  
Marine Pollutant: Not Applicable  
Air - IATA: 2.2.

### 14.4 Packing group

Not classified.

### 14.5 Environmental hazards

Not classified.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU REGULATIONS

##### Regulation (EC) No. 2037/2000 (substances that deplete ozone)

Not applicable

##### Regulation (EC) No. 850/2004 (persistent organic pollutants)

Not applicable

##### Regulation (EC) No.689/2008 (concerning the export and import of dangerous chemicals)

Not applicable

##### Regulation (EC) No. 1272/2008 (Classification, Labelling and Packaging of substances and mixtures)

This material does not meet any of the criteria.

Lith-ex Aerosols are classed as an 'Article' and do not contain any substances listed on the candidate list of Substances of Very High Concern.

##### Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)

The mineral vermiculite is a naturally occurring product and, hence, article 2 (7) (b) and Annex V paragraph 7 of the REACH regulations exempts this material from REACH registration.

#### US FEDERAL REGULATIONS

Vermiculite is listed on the United States TSCA (Toxic Substances Control Act) inventory.

##### Source of Reference for OELs

HSE EH40 for Workplace Exposure Limits





## 15.2 Chemical safety assessment

No chemical safety assessment has been carried out by the supplier.

## SECTION 16: Other information

### i. Abbreviations and acronyms

WEL: 8 h TWA – Workplace Exposure Limit: 8 hour Time Weighted Average.

UVCB – Unknown or Variable composition, Complex reaction products or of Biological materials.

### ii. Key Literature References and Sources of Data

a) Guidance Note EH40 Occupational Exposure Limits is published annually by the Health and Safety Executive.

The latest relevant limits should be observed.

b) HS(G) 37 1993 "An introduction to Local Exhaust Ventilation" and

Guidance Note EH44 2013 "Dust in the Work Place" are both available from HM Stationery Office.

c) Advice on respiratory protective equipment is also given in BS EN 529:200.

d) EN 166: 2002 Personal Eye Protection.

e) Dupré Minerals Safety data sheets SDS D0156EN AVD and SDS D0157EN AVD-Li

### iii. Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 CLP

This material is not classified under this regulation.

### iv. Training Advice

All employees should be given adequate training in the proper use and handling of this product and any precautions and protective equipment required under applicable regulations

The information given on this Safety Data Sheet is to the best of Firechief Global's knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users' responsibility to satisfy themselves as to the suitability and completeness of the information for their own particular use.

