

KODAK Lighting Devices

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 25/JUL/2022 Version: 1.0

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

1.1. Product identifier

Product form : Article
Product name : KODAK LED 450 Lantern

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Consumer lighting device intended for general public.
Uses advised against: No additional information available.

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

Strand International GmbH
Zum Schlahn 32
51709 Marienheide
Deutschland
T +44 (0) 1252 861000
sales@strandeurope.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night 1-800-424-9300 / +1 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

This product is an article within the definition of UK and EU REACH and CLP Regulations. Classification and labelling and the provision of an SDS is not required, but this document contains information and advice concerning safe handling of the product.

Chemical components are contained within the article to prevent release during normal transport, storage and use. Contact with chemical content is not foreseen during normal use.

2.2. Label elements

Pictogram	None.
Signal word	None.
Hazard statements	None.
Precautionary statements	None.

2.3. Other hazards

Exposure to fire, or mechanical or electrical stress may cause failure of the container and release of chemical components.
A chemical component causes eye damage and skin corrosion. Toxic if swallowed. May cause damage to organs through prolonged or repeated exposure. The chemical component may decompose on heating or reaction with water to produce heat and irritating and toxic gas.
This document gives advice on hazards relating to the chemical components of the article. The user is advised that additional hazards may be present from handling the product. See instructions for use.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Declarable components	Product identifier	%	Classification, supplemental hazards, ATE, M-factor, and SCL
Not applicable to article	N/A	N/A	N/A
Other components			
Lithium hexa-fluorophosphate (LiPF6)	CAS-No.: 21324-40-3 EC-No.: 244-334-7	≥ 10 – < 30	Acute Tox 3, H301; Skin Corr 1A, H314; Eye Dam 1, H318; STOT RE 1, H372 (bones, teeth)
Copper (Cu)	CAS-No.: 7440-50-8 EC-No.: 231-159-6	≥ 5 – < 15	Aquatic Acute 1, H400 (M = 1); Aquatic Chronic 2, H411

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Product as supplied not inhalable. For inhalation of chemical contents, remove exposed person to fresh air and keep warm and at rest in a position comfortable for breathing. For difficulties in breathing, respiratory irritation, or other symptoms, call a poison centre or doctor.
Skin	Product as supplied not harmful to skin. For skin contact with chemicals, wash affected area with soap and water. Call a doctor if irritation, rash, or other symptoms occur.
Eye	Product as supplied not harmful to eyes. In case of contact of chemicals in eyes, rinse with room-temperature water or eyewash for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a doctor if irritation persists.
Ingestion	If chemicals are in mouth, rinse mouth thoroughly with water and spit out rinsings. Water may be given to drink if chemicals have been swallowed. Get prompt medical attention. Do not induce vomiting, unless instructed by medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

A chemical component causes eye damage and skin corrosion. May cause damage to organs (eg bones and teeth) through prolonged or repeated exposure.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: A standard ABC or dry chemical fire extinguisher is recommended.
Unsuitable extinguishing media	: Using water or foam on damaged product may result in reaction to produce toxic and corrosive hydrogen fluoride. Using excess water will dilute the hydrogen fluoride and reduce its hazards.

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5.2. Special hazards arising from the substance or mixture

The product contains lithium battery materials, which may ignite if heated. Toxic, corrosive gas (hydrogen fluoride) may be emitted during fire or in contact with water.

5.3. Advice for firefighters

Remove product from fire or cool containers with water spray. Firefighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Product articles may be collected if undamaged.

For chemical spills of the contents, wear personal protection. Ventilate area and do not breathe vapours. Remove or extinguish sources of ignition.

Follow prescribed procedures for responding to spills and reporting to authorities.

6.2. Environmental precautions

Prevent product from entering water courses or drainage system.

6.3. Methods and material for containment and cleaning up

Clean up spill as soon as possible. Do not flush to sewer.

For small quantities, wipe off with damp cloth or paper.

For larger quantities, absorb with inert material and carefully sweep up or collect using vacuum cleaner.

Wash contaminated surfaces with water and detergent. Collect waste, washings, and contaminated materials for safe disposal.

6.4. Reference to other sections

For recommended personal protective equipment, see Section 8.

For disposal considerations, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid damaging the product. Do not immerse in water or other liquid. Keep away from fire and strong heat. Do not disassemble the product. Strong heating may lead to fire and production of irritating or harmful gas.

Exposure to fire, or mechanical or electrical stress may cause failure of the container and release of chemical components.

Avoid skin and eye contact with the chemical content of the product, and inhalation of vapours. Ventilate area if exposure to chemicals is possible.

See Section 8 for personal protection.

Wash hands after contact with chemicals.

The user is advised that additional hazards may be present from handling the product. See instructions for use.

7.2. Conditions for safe storage, including any incompatibilities

Store product in a cool, dry well-ventilated place.

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7.3. Specific end use(s)

Consumer lighting device.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

EU limit values	Hydrogen fluoride: IOELV: 8 h TWA, 1.5 mg/m ³ (1.8 ppm); 15 min, 2.5 mg/m ³ (3 ppm).
National limit values	UK: Copper and compounds: dust and mists (as Cu): WEL: 8 h TWA 1 mg/m ³ ; 15 min 2 mg/m ³ . Hydrogen fluoride (as F): WEL: 8 h TWA, 1.5 mg/m ³ (1.8 ppm); 15 min, 2.5 mg/m ³ (3 ppm). Germany: Copper, dusts and mists (as Cu) (respirable fraction) (DFG): 8 h TWA, 0.01 mg/m ³ ; 15 min 0.02 mg/m ³ . Hydrogen fluoride: AGS: 8 h TWA, 0.83 mg/m ³ (1 ppm); 15 min, 1.66 mg/m ³ (2 ppm) (ceiling) (skin). DFG: 8 h TWA, 0.83 mg/m ³ (1 ppm); 15 min, 1.66 mg/m ³ (2 ppm) (ceiling).).

8.1.2. Recommended monitoring procedures

BS EN 14042:2003; Workplace Atmospheres; Guide for the Application and Use of Procedures for the Assessment of Exposure to Chemical and Biological Agents, or specific national equivalent.

8.1.3. Air contaminants formed

No additional information available.

8.1.4. DNEL and PNEC

LiPF₆: DNELs: worker, long-term exposure, systemic effects, dermal, 0.133 mg/kg/day; worker, long-term exposure, systemic effects, inhalation, 0.931 mg/m³.

LiPF₆: PNECs: freshwater, 0.31 mg/L; intermittent release, 0.68 mg/L; sewage treatment plant, 48 mg/L; freshwater sediment, 7.73 mg/kg dry sediment; soil, 13.5 mg/kg dry soil.

8.1.5. Control banding

No additional information available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

For small or incidental chemical exposures, good general ventilation (3 to 5 air exchanges per hour) is recommended. For chemical processing, local exhaust ventilation or use in a closed system is required.

8.2.2. Personal protection equipment

The need for personal protective equipment should be based on a workplace risk assessment for the particular use.

For contact with chemicals, wear chemical-resistant gloves and eye protection. Where more extensive contact may occur, wear protective clothing (eg apron, overalls). PPE should conform to British (EN) standards, eg gloves EN 420 and 374; eye protection EN 166, or other national equivalent. Consult PPE manufacturers concerning breakthrough times applicable to your particular use.

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Personal protective equipment symbol(s):



8.2.3. Environmental exposure controls

No additional information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Mixed
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not applicable to solid
Auto-ignition temperature	: Not available
Decomposition temperature	: LiPF6, 160 °C
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable to solid
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

LiPF6 hydrolyses readily in contact with water.

10.2. Chemical stability

Stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Hazardous chemicals may leak from damaged product.

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10.4. Conditions to avoid

Avoid damaging product with mechanical or electrical stress. Do not heat during use or storage. Strong heating may lead to fire and production of irritating or harmful gas.

10.5. Incompatible materials

Avoid immersion in water or other liquid.

10.6. Hazardous decomposition products

A chemical component (LiPF₆) may decompose on heating or react with water to form hydrogen fluoride gas (very toxic, corrosive).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	: Not applicable to consumer lighting device. LiPF ₆ : toxic if swallowed. May decompose on heating or react with water to form hydrogen fluoride gas (very toxic, corrosive).fluoride gas (toxic, corrosive).
Skin corrosion/irritation	: Not applicable to consumer lighting device. LiPF ₆ : causes corrosion of skin..
Serious eye damage/irritation	: Not applicable to consumer lighting device. LiPF ₆ : causes serious eye damage.
Respiratory or skin sensitisation	: Not applicable to consumer lighting device. No relevant chemical component has been identified with this effect.
Germ cell mutagenicity	: Not applicable to consumer lighting device. No relevant chemical component has been identified with this effect.
Carcinogenicity	: Not applicable to consumer lighting device. A chemical component is suspected of causing cancer.
Reproductive toxicity	: Not applicable to consumer lighting device. A chemical component may damage fertility and is suspected of damaging the unborn child.
STOT-single exposure	: Not applicable to consumer lighting device. Chemical vapour may irritate the respiratory tract.
STOT-repeated exposure	: Not applicable to consumer lighting device. LiPF ₆ : causes damage to organs through prolonged or repeated exposure, with particular effects on bones, teeth and respiratory tract.
Aspiration hazard	: Not applicable to consumer lighting device.

11.2. Information on other hazards

No ingredient has been classified with endocrine disrupting properties relevant for humans

SECTION 12: Ecological information

12.1. Toxicity

Not applicable to consumer lighting device.

LiPF₆: toxic to aquatic life with long lasting effects. EC50 (crustacea; 48 h), >100 mg/L; ErC50 (algae; 96 h), >100 mg/L.

12.2. Persistence and degradability

Consumer lighting device will persist in the environment.

LiPF₆: Rapid reaction with water releases HF and LiF, leading to production of dissolved F⁻ ions, and subsequent release of lithium (Li⁺) and phosphate (PO₄³⁻) ions.

12.3. Bioaccumulative potential

Not applicable to consumer lighting device. No relevant chemical component has been identified with this effect.

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12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No chemical component has been identified with these effects.

12.6. Endocrine disrupting properties

No chemical component has been classified with endocrine disrupting properties relevant for the environment.

12.7. Other adverse effects

No chemical component has been identified as hazardous to the ozone layer.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The usual method of disposal of consumer lighting device is via a recycling site. Disposal via landfill, drains, or incineration is not recommended.

Disposal must be in accordance with current national and local regulations, eg UK Waste Electrical and Electronic Equipment recycling (WEEE Regulations 2006) (EU Directive 2012/19/EU) (as amended).

General EU requirements for waste chemicals are given in Directive 2008/98/EC

SECTION 14: Transport information

ADR	IMDG	IATA	ADN	RID
14.2 UN number or ID number				
UN 3481	UN 3481	UN 3481	UN 3481	UN 3481
14.2 UN proper shipping name				
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	Lithium ion batteries contained in equipment	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
14.3 Transport hazard class(es)				
9A	9	9A	9A	9A
				
14.4 Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5 Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

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14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M4
Special provisions (ADR)	: 188, 230, 310, 348, 360, 376, 377, 387, 390, 670
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
Transport category (ADR)	: 2
Tunnel restriction code (ADR)	: E
EAC code	: 2Y

Transport by sea

Special provisions (IMDG)	: 188, 230, 310, 348, 360, 376, 377, 384, 387
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-I
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW19
Properties and observations (IMDG)	: Electrical batteries containing lithium ion encased in a rigid metallic body. Lithium ion batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 967
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 967
CAO max net quantity (IATA)	: 35kg
Special provisions (IATA)	: A48, A88, A99, A154, A164, A181, A185, A206, A213, A220
ERG code (IATA)	: 12FZ

Inland waterway transport

Classification code (ADN)	: M4
Special provisions (ADN)	: 188, 230, 310, 348, 360, 376, 377, 387, 390, 670
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M4
Special provisions (RID)	: 188, 230, 310, 348, 360, _376, 377, 387, 390, 670
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P903, 908, 909, P910, P911, LP903, LP904, LP905, LP906
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE2
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

UK: Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended.
COSHH Essentials: Easy Steps to Control Chemicals; HSE Books 2003 (also available on the HSE web site).
WEEE Regulations 2013; Government Guidance Notes; March 2014.

Germany: WGK (Wassergefährdungsklassen) Regulation: Verwaltungsvorschrift wassergefährdende Stoffe (VwVwS), designating water hazard classes. Not applicable to article. Contains copper with WGK, 2 (ID 9696).
Technische Regeln für Gefahrstoffe (TRGS) 900; Arbeitsplatzgrenzwerte (AGW).
Chemicals Act: Gesetz zum Schutz vor gefährlichen Stoffen (Chemikaliengesetz - Chem G).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revisions	This SDS is the first version (1.0) in EU format (Regulation 2020/878), using classification according to the CLP Regulation.
Abbreviations	ATE, acute toxicity estimate; DMEL, derived minimum effect level; DNEL, derived no-effect level; IOELV, EU indicative occupational exposure limit value; PBT, persistent, bioaccumulative, and toxic; PNEC, predicted no-effect concentration; STOT RE, specific target organ toxicity, repeated exposure; STOT SE, specific target organ toxicity, single exposure; TWA, time-weighted average; WEL, UK workplace exposure limit; vPvB, very persistent, very bioaccumulative.
References	Search for chemicals; available at the European Chemicals Agency (ECHA) website: http://echa.europa.eu/ . GESTIS International Limit Values; Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA); http://www.dguv.de .
Basis of classification	Classification is not applicable to an article.
List of hazard statements	H301: Toxic if swallowed; H314: Causes severe skin burns and eye damage; H318: Causes serious eye damage; H372: Causes damage to organs through prolonged or repeated exposure; H400: Very toxic to aquatic life; H411: Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.