

## Lithium-ion batteries

### 1. Identification of the substance/mixture and of the company/undertaking

**Product names:** KODAK Smartphone and Tablet Charger, KODAK Smartphone Charger

**Sizes:** 1800mAh, 2000mAh, 5200mAh

**Supplier:** Strand Europe Ltd., Strand House, Galway Road, Yateley, Hampshire, GU46 6GE, United Kingdom

Emergency telephone number: +44 (0) 1252 864533

For other information or to request an MSDS, contact;

Kodak Batteries - Technology Department  
Tel. +44 (0) 1252 864520  
Email: kodakbatteries@strandeuropa.com

**Synonyms:** None.

**Product Use:** Battery, for consumer and industrial use.

### 2. Hazards identification

Chemicals are contained within sealed can. Potential for exposure shouldn't exist unless the battery leaks, is exposed to mechanical or electrical abuse. Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

A shorted lithium battery can cause thermal and chemical burns upon contact with skin.

### 3. Composition/information on ingredients

Ingredient	CAS No.	Weight (%)
Lithium Manganese Nickel Cobalt Oxide	346417-97-8	25 - 35
Graphite Powder	7782-42-5	15 – 20
Lithium Hexafluorophosphate	21324-40-3	1 - 2
Ethylene Carbonate	96-49-1	0 – 10
Ethyl methyl Carbonate	623-53-0	0 – 10
Dimethyl Carbonate	616-38-6	0 – 10
Acetylene Black	1333-86-4	0 - 2

Contains no lithium metal (despite the name).

Weight percent listed is based on approximate percent of the average weight of the battery.

The components in this section may only represent a hazard if the integrity of the battery is compromised.

## Lithium-ion batteries

### 4. First aid measures

The routine handling and use of intact, non-damaged batteries is not expected to result in situations that require first-aid measures. If battery is damaged due to opening, cutting, crushing, overheating, improper use, exposure to fire or high temperatures, battery contents may be released.

**Inhalation:** If vapours or fumes from vented or leaking battery are irritating to respiratory tract, move to fresh air. Get medical attention if symptoms persist.

**Eyes:** In case of contact with battery contents (liquid or metal), immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

**Skin:** In case of contact with battery contents (liquid or metal), immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. Get medical attention immediately.

**Ingestion:** Call a physician or poison control center immediately for any actual or suspected ingestion. Rinse mouth and surrounding area with water.

#### Notes to physician:

- Potential leakage of less than 1 gram of ethylene carbonate, dimethyl carbonate and lithium hexafluorophosphate
- Volatile carbonates may leave residue lithium hexafluorophosphate which is an eye and skin irritant and caustic material.
- Abuse of the battery may cause thermal burns or fire.

### 5. Fire-fighting measures

**Extinguishing Media:** Dry chemical or Carbon dioxide.

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Rapidly cool batteries and adjacent structures with water.

**Hazardous Combustion Products:** Carbon monoxide, carbon dioxide, lithium oxide fumes, possible phosphorous oxides, hydrofluoric acid

**Unusual Fire and Explosion Hazards:** Increase ventilation as irritating vapours may be released from ruptured cell. Avoid skin or eye contact and inhalation of vapours.

### 6. Accidental release measures

If battery material is released, evacuate personnel from area until fumes dissipate. Increase ventilation. Avoid skin and eye contact or inhalation of vapors. If skin is in contact with electrolyte, wash thoroughly with water. Remove spilled liquid with adsorbent, sealed in plastic bag using appropriate protective gear. Dispose of in accordance with local regulations (see Section 13. Disposal considerations).

## Lithium-ion batteries

### 7. Handling and storage

Store at room temperature. Avoid mechanical or electrical abuse. DO NOT short or install incorrectly. Batteries may explode, pyrolize or vent if disassembled, crushed or exposed to high temperatures. Install batteries in accordance with equipment instructions. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag.

**Personal precautions:** If battery has been damaged, do not breathe fumes or vapours. Do not get battery contents in eyes, on skin, on clothing. Wash thoroughly after handling.

**Prevention of Fire and Explosion:** DO NOT DISASSEMBLE. Keep away from heat and flame. Do not short circuit.

**Storage:** Do not store in a manner that allows terminals to short circuit. Keep in a dry, cool place. Keep away from direct sunlight. Storage above 21°C (70°F) may affect product quality. Do not freeze. Keep away from water. Short circuiting may reduce battery service life. Extended short circuiting creates high temperatures in the battery. High temperatures can cause leakage, explosion, and/or flame. Keep away from incompatible substances (see Incompatibility section.)

### 8. Exposure controls/personal protection

#### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Lithium Cobalt oxide	OSHA	Ceiling Limit Value	0.1 mg/m <sup>3</sup>

**Respiratory protection:** None needed under normal conditions. For venting battery provide as much ventilation as possible and avoid confined areas.

**Eye protection:** None under normal conditions. When handling a damaged battery, wear safety glasses with side shields (or goggles).

**Hand protection:** None under normal conditions. When handling a damaged battery, wear impervious gloves.

### 9. Physical and chemical properties

**Physical form:** solid

**Odour:** odourless

**Specific gravity:** not applicable

**Vapour density:** not applicable

**Melting point/range:** not applicable

**Water solubility:** insoluble

## Lithium-ion batteries

**pH:** not applicable

**Flash point:** not applicable

### 10. Stability and reactivity

**Stability:** Stable under normal conditions mechanical abuse and electrical abuse

**Avoid:** mechanical abuse and electrical abuse

**Incompatibility:** Water and Heating above 70°C

**Hazardous decomposition products:** None under normal conditions of use.

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

### 11. Toxicological information

**Effects of Exposure:** none unless battery is ruptured. If internal content is exposed, corrosive fumes will be very irritant to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

**Inhalation:** May cause irritation to the mucous membranes and upper respiratory tract.

**Eyes:** eye irritant

**Skin:** skin irritant

**Ingestion:** Tissue damage to throat and gastro-respiratory tract if swallowed.

Exposure to content may aggravate conditions such as eczema, skin allergies, lung injuries, asthma and other respiratory disorders.

### 12. Ecological information

If used and disposed of correctly, this product does not present an environmental hazard.

### 13. Disposal considerations

DO NOT INCINERATE or expose to fire. This can result in loss of seal, leakage and/or explosion of the cell. Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws.

### 14. Transport information

Kodak Power banks containing Lithium-Ion batteries is shown in this MSDS comply to the necessary requirements under the UN Recommendations on the Transport of Dangerous Goods Model Regulations and UN Manual of Tests and Criteria as referenced in the following transportation regulations:

Lithium-ion batteries

UN no.	Shipping mode	Regulations	Packing instructions	Classification	Lithium handling label	Class 9 DG label
UN 3481	USA	US Department of Transportation of Hazardous Substances (HMR) 49 CFR 173-185	SP188	Non-dangerous goods	Needed	Not necessary
	Air	ICAP/IATA DGR 55 <sup>th</sup> edition	PI967 Section II	Non-dangerous goods	Needed	Not necessary
	Sea	IMO/IMDG Code 35-10	P903 SP188 SP230	Non-dangerous goods	Needed	Not necessary
	Road/Rail	ADR / RID	P903 P903a P903b	Non-dangerous goods	Needed	Not necessary

## 15. Regulatory information

### Notification status

These products are covered by, in part or as a whole, by the following regulations:

- “Dangerous Goods Regulation”
- “Recommendations on the Transport of Dangerous Goods Model Regulations”
- “International Maritime Dangerous Goods”
- “Technical Instructions for the Safe Transport of Dangerous Goods”
- “Classification and code of dangerous goods”
- “Occupational Safety and Health Act” (OSHA)
- “Toxic Substances Control Act” (TSCA)
- “Consumer Product Safety Act” (CPSA)
- “Federal Environmental Pollution Control Act” (FEPCA)
- “The Oil Pollution Act” (OPA)
- “Superfund Amendments and Reauthorization Act Title III (302/311/312/313)” (SARA)
- “Resource Conservation and Recovery Act” (RCRA)
- “Safety Drinking Water Act” (CWA)
- “California Proposition 65”
- Code of Federal Regulations” (CFR)



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## Lithium-ion batteries

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### 16. Other information

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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