EMERGENCY LED DRIVER

Material Safety Data Sheet (MSDS)

Issue date: 12.08.21

INFORMATION AND APPLICABILITY

The Material Safety Data Sheet (MSDS) requirements of the Occupational Safety and Health Administration (OSHA) for chemicals are not applicable to manufactured articles such as lamps. No material contained in a lamp is released during normal use and operation.

The following information is provided as a service to our customers. This Lamp Material Information Sheet contains the Material Safety Data Sheet information that is applicable.

Section 1. MANUFACTURER AND CONTACT INFORMATION

EiKO GLOBAL

- **US :** 18000 W. 105 Street, 3rd Floor, Olathe, KS 66061 • 1-800-852-2217
- **Canada** : 7900 Goreway Dr Unit 8, Brampton, ON L6T 5W6 • 1-888-741-2673

Section 2. HAZARDOUS INGREDIENTS

- **Emergency overview:** This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the below hazards exist.
- **Classification according to GHS**
  - Acute toxicity, oral (4)
  - Skin corrosion/irritation (2)
  - Serious eye damage/eye irritation (2A)
  - Specific target organ toxicity, single exposure; Respiratory tract irritation (3)

LABEL ELEMENTS

Hazard pictogram(s):

Signal word:

Warning

Hazard Statement(s):

- H302 Harmful if swallowed
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation

Precautionary statement(s):

Prevention:

- P264 Wash skin and clott,ing thorougtily after handling.
- P270 Do not eat, drink or smoke when using this product
- P280 Wear protective gloves, protective clothing, eye protection, face protection.
- P261 Avoid breathing dust, fume, gas, mist, vapours, spray.
- P271 Use only outdoors or in a well-ventilated area.

Response:

- P301 + P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.
- P330 Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty water.
- P321 Specific treatment (See additional emergency instructions).
- P333 + P313 If skin irritation or rasti occurs: Get medical advice.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER, if you feel unwell.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

Disposal:

- P501 Send contents to approved waste treatment plants.

Other hazards

- Physical and chemical hazards: See Section 10
- Human health hazards: See Section 11
- Environmental hazards: See Section 12

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Mixture

CHEMICAL COMPOSITION	CAS NO.	EC NO.	WEIGHT (%)
Aluminium	7429-90-5	231-072-3	2-7
Copper	7440-50-8	231-159-6	5-15
Linear and Cyclic Carbonic Solvents	---	---	5-16
Graphite	7782-42-5	231-955-3	15-25
Lithium Nickel Cobalt Manganese Oxide	---	---	25-45
Polyvinylidene fluoride resin	24937-79-9	607-458-6	0.1-1
Steel, nickel and inert polymer	---	---	0.5-5
Nb	---	7440-03-1	231-113-5

Section 4. FIRST-AID MEASURES

Description of first aid measures

- **General information:** No special measures required.
- **After eye contact:** Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritaUon persists.
- **After skin contact:** Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, gel medical attention.
- **After inhalation:** Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.
- **After swallowing:** Do not induce vomiting. Get medical attention.
- **Personal protective equipment for first-aid responders:** No data available.
- **Most important symptoms/effects, acute and delayed:** No data available.
- **Indication of immediate medical attention and special treatment needed:** Treat symptomatically.

Section 5. FIRE FIGHTING MEASURES

- **Suitable extinguishing media: Small Fire:** Dry chemical, CO2, water spray or regular foam. **Large Fire:** Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.
- **Unsuitable extinguishing media:** No data available.
- **Specific Hazards arising from the chemical:** Special hazards arising from the substance or mixture.

  Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium Ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature (>150'C(302"F)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with nare-burning effect; may ignite other batteries in close proximity.

- **Specific protective actions for fire-fighters:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protectlve clothing will only provide limited protection.

Section 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind, Uphill and/or upstream. Ventilate closed spaces before entering. Large Spill: Consider init1al downwind evacuation for at least 100 meters (330 feet).
- **Protective equipment:** No data available.
- **Emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area), Do not touch or walk through spilled material. Absorb with earth, sand or other non-combustible material. Leaking batteries and contaminated absorbent material should be placed in metal containers.
- **Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.
- **Methods and materials for containment and cleaning up:** For all waste handing must rarer to United Nations, National and Local Regulations for disposal.
  - See Section 7 for information on safe handling.
  - See Section 8 for 1nformation on personal protection equipment.
  - See Section 13 for disposal information.

Section 7. HANDLING AND STORAGE

- **Precaustions for safe handling:** Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause bums, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Avoid all personal contact, inluding inhalation. Wear portective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.
- **Conditions for safe storage, including any incompatibilities:** Store In a cool, dry, well-ventilated place. Keep away from heat, avoiding the long lime of sunlight.

Section 8. EXPOSURE CONTROLS, PERSONAL PROT

CAS NO.	ACGIH	NIOSH	OSHA
7429-90-5	TLV-TWA 1mg/m^3	REL-TWA 2mg/m^3 REL-TWA 5mg/m^3 REL-TWA 10mg/m^3	PEL-TWA 5mg/m^3 PEL-TWA 15mg/m^3
7440-50-8	TLV-TWA 0.2mg/m^3 TLV-TWA 1mg/m^3	REL-TWA 1mg/m^3 REL-TWA0.1mg/m^3	PEL-TWA0.1mg/m^3 PEL-TWA 1 mg/m3
7782-42-5	TLV-TWA 2mg/m^3	REL-TWA 2.5mg/m^3	PEL-TWA 15mppcf PEL-TWA 20mppcf
24937-79-9	N/A	N/A	N/A

- **Appropriate engineering controls:** The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.

Personal Protective Equipment:

- **Respiratory protection:** Wear suitable protective mask. For a large large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.
- **Hand Protection:** Wear appropriate protective gloves to reduce skin contact.
- **Eye Protection:** Wear safety goggles or eye protection combined with respiratory protection.
- **Skin and Body Protection:** Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the conlenl of certain hazardous substances in the workplace.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- **Colour:** Red
- **Physical State:** Prismatic
- **Odour:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available

- **Boiling point or initial boiling point and boiling range:** Not available
- **Flash Point:** Not available
- **Flammability:** Not available
- **Solubility:** Not available
- **Lower and upper explosion limitlflammability limit:** Not available
- **Auto-ignition temperature:** Not available
- **Decomposition temperature:** Not available
- **Kinematic viscosity:** Not available
- **Partition coefficient: n-octanol/water (log value):** Not available
- **Vapour pressure:** Not available
- **Density and/or relative density:** Not available
- **Relative vapour density:** Not available
- **Particle characteristics:** Not available
- **Other information:** Not available
- **Voltage:** 14.4V
- **Electric Capacity:** 5.2Ah
- **Electric Energy:** 74.88Wh

Section 10. STABILITY AND REACTIVITY

- **Reactivity:** No data available.
- **Chemical stability:** Stable.
- **Possibility of hazardous reactions:** No data available.
- **Conditions to Avoid:** Flames, sparks, and other sources of ignition, incompatible materials.
- **Incompatible materials:** Oxidizing agents, acid base.
- **Hazardous decomposition products:** Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 11. TOXOLOGICAL/REGULATORY INFORMATION

Acute toxicity:

CAS NO.	LC50/LD50
7429-90-5	No data available.
7440-50-8	No data available.
7782-42-5	No data available.
24937-79-9	No data available.

- **Skin corrosion/irritation:** No data available.
- **Severe eye injury/irritation:** No data available.
- **Respiratory or skin sensitization:** No data available.
- **Germ cell mutagenicity:** No data available.
- **Carcinogenicity:** No data available.
- **Reproductive toxicity:** No data available.
- **Specific target organ toxicity-single exposure:** No data available.
- **Specific target organ toxicity-repeated exposure:** No data available.
- **Inhalation hazard:** No data available.
- **Skin:** No data available.
- **Eyes:** No data available.
- **Inhalation:** No data available.
- **Ingestion:** No data available.

Section 12. ECOLOGICAL INFORMATION

- **Ecological Toxicity:** No data available.
- **Persistence and degradability:**No data available.
- **Bioaccumulative Potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** No data available.

Section 13. DISPOSAL CONSIDERATIONS

Waste disposal method: Consult state, local or national regulations to ensure proper disposal.
Uncleaned packaging: Disposal must be made according to official regulation.

Section 14. TRANSPORT INFORMATION

UN or ID Number

IATA	UN3480
IMDG	UN3480
Model Regulation	UN3480

Proper Shipping Name/Description

IATA	LITHIUM ION BATTERIES
IMDG	LITHIUM ION BATTERIES
Model Regulation	LITHIUM ION BATTERIES

Class or Div. (Sub Hazard) IATA

IATA	9

Packing Group

IATA	LITHIUM ION BATTERIES
IMDG	LITHIUM ION BATTERIES
Model Regulation	LITHIUM ION BATTERIES

Hazard Label

IATA	LITHIUM ION BATTERIES
IMDG	LITHIUM ION BATTERIES
Model Regulation	LITHIUM ION BATTERIES

Environmental hazards

Marine pollutant	NO
IMDG EmS:	NO
Special precautions for user	NO

- **Transport information:**
  - The Emergency LED Driver EMA30YY-ZZZ has passed the test UN38.3, according to the report ID: MPIO1N4L 115027U7.
  - According to the Packing Instruction 965 section 1B of IATA DGR 63rd Edition for transportation, Cargo aircraft only.
  - According to the special provlslon 188 of IMDG (40-20) or the special provlslon 188 of <<Recommendations On The Transport Of Dangerous Goods-Model Regulations» (22nd), the goods are not subject to other provision of this code.
  - Separate batteries to prevent short-circuiting. a.nd they should be packed in strong package during transport. Lithium cell or battery should incorporate a safety venting device or be designed to prevent a violent rupture under normal transport conditions. Keep away from high temperature and open flames.
- **Note:** State of Charge (SoC) not exceeding 30% of their rated capacity. (By air, lithium ionbatteries)
- **Transport Fashion:** By air, by sea, by railway, by road.

Section 15. REGULATORY INFORMATION

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

CAS NO.	TSCA	IECSC	DSL/NDSL	EINECS/ELINCS/NLP
7429-90-5	LISTED	LISTED	LISTED DSL	LISTED
7440-50-8	LISTED	LISTED	LISTED DSL	LISTED
7782-42-5	LISTED	LISTED	LISTED DSL	LISTED
24937-79-9	LISTED	LISTED	LISTED DSL	LISTED

Section 16. ADDITIONAL INFORMATION

- **Other information:** To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Abbreviations

- CAS: (Chemical Abstracts Service);EC: (European Commission); ACGIH: (American Conference of Governmental Industrial Hygienists); NIOSH: (US National Institute for Occupational Safety and Health}; OSHA: (US Occupational Safety and Health); TLV: (Threshold Limit Value); TWA: (Time Weighted Average); STEL: (Short Term Exposure Limit); PEL: (Permissible Exposure Level); REL: (Recommended Exposure Limit); PC-STEL: (Permissible concentration-short time exposure limit); PC-TWA: (Permissible concentration-time weighted average); IARC: (International Agency for Research on Cancer); LCSO: (Lethal concentration, 50 percent kill); LOSO: (Lethal dose, 50 percent kill); EC50: (Median effective concentration); BCF: (Bioconcentration Factor); BOD: (Biochemical oxygen demand); IECSC: (Inventory of Existing Chemical Substances in China); NOEC: (No observed effect concentration); NTP: (US National Toxicology Program); RTECS: (Registry of Toxic Effects of Chemical Substances); TOG: (Total Organic Carbon); TSCA: (Toxic Substances Control Act of USA); DSL: (the Domestic Substances List of Canada); NDSL: (the Non-domestic Substances List of Canada); IATA: (International Air Transport Association); IMDG: (International Maritime Dangerous Goods); TOG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations);

ITEM	ORDER CODE
EBE-15-3	801083
EBE-25-3	801084
EBF-40-3	13469
EEB5WBTU	11279
EEBE08WHA170S	11674
EEBE15WHA170S	13572
EEBE18WHA170S	11675
EEBE25WHA170S	13573
EEBE30WUA050S	10920
EEBE40WHA170S	13574
EEBE40WVA500	13571
EEBN08WHB058	14653
EEBN08WUA050	10918
EEBN15WUA050	10896
EEBN20WUA050	10897
EEBW25WHA170	12900
EEBW40WHA170	12901
EEBW40WVA500	12902
EMB-CP-5WBT-U	10361
FHSCP-UNV-10P-L-SD	10814
WP-EWG-040U	12068