

D-Lux+ Lithium-Ion Battery

Safety Data Sheet

1. PRODUCT AND MANUFACTURER INFORMATION

| | |
|---|--|
| A. Product Name | D-Lux+ Lithium-Ion Battery |
| B. Recommended use of the product and restrictions on its use | |
| Recommend use of the product | D-Lux+ Battery |
| Restrictions on use of the product | For dental professionals only |
| C. Supplier Information (For imported goods, enter the information of the domestic supplier that can be contacted urgently) | |
| Name of Company | DiaDent Group International |
| Address | 16 Osongsaengmyeong 4-ro, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea 28161 |
| Emergency contact number | 82-43-266-2315 |
| D. Further Information | |
| - Battery-System : Lithium-Ion(Li-ion) | - Nominal Voltage : 3.6V |
| - Rated Capacity : 2.6Ah | - Wh rating : 9.36 Wh |

2. HAZARDS IDENTIFICATION

| | |
|---|--|
| A. GHS Classification | |
| Self-heating substances and mixtures : Category 2 | |
| Specific target organ toxicity - Single exposure : Category 3, Respiratory System | |

B. GHS Label elements including precautionary statements

Pictograms



Signal Words

Caution

Hazard Statement(s)

H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage

Precautionary Statement(s)

Prevention

P235+P410 Keep cool. Protect from sunlight
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/protective clothing/eye protection/face protection

Response

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 Call a POISON CENTER or doctor/physician if you feel unwell

Storage

P403+P233 Store in a well-ventilated place, Keep container tightly closed
P405 Store locked up
P407 Maintain air gap between stacks/pallets

Disposal

P413 Store bulk masses greater than 10kg / 22lbs at temperatures not exceeding 40°C / 104°F
P420 Store away from other materials
P510 Dispose of contents/container according to regulations.

C. Other hazards(according to the NFPA Rating System)

| | |
|--------------|---|
| Health | 1 |
| Flammability | 1 |
| Reactivity | 0 |

3. COMPOSITION/INFORMATION ON INGREDIENT

| Chemical Identity | Common Name | CAS Number | % Volume |
|---|-------------|------------|-----------|
| Aluminum Foil | - | 7429-90-5 | 2-10 |
| Metal Oxide(Lithium Cobalt Oxide) | - | 12190-79-3 | 20-50 |
| Polyvinylidene Fluoride(PVDF) | - | 24937-79-9 | <5 |
| Styrene-Butadiene-Rubber | - | 27288-99-9 | <1 |
| Copper Foil | - | 7400-50-8 | 2-10 |
| Carbon(proprietary) | - | 7400-44-0 | 10-30 |
| Electrolyte(Methyl propionate) | - | 554-12-1 | 10-20 |
| Ethylene carbonate | - | 96-49-1 | |
| Lithium hexafluorophosphate | - | 21324-40-3 | |
| Stainless steel, Nickel and inert materials | - | N/A | Remainder |

4. FIRST AID MEASURES

- | | |
|---------------|---|
| A. Eyes | Not a health hazard. |
| B. Skin | Not a health hazard. |
| C. Inhalation | Not a health hazard. |
| D. Ingestion | If swallowed, obtain medical attention immediately. |

IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING, THE FOLLOWING ACTIONS ARE RECOMMENDED.

- | | |
|---------------|--|
| A. Eyes | Rinse eyes with water for 15 minutes and seek medical attention. |
| B. Skin | Wash area thoroughly with soap and water and seek medical attention. |
| C. Inhalation | Leave area immediately and seek medical attention. |
| D. Ingestion | Drink milk/water and induce vomiting; seek medical attention. |

5. FIRE FIGHTING MEASURES

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|--------------------------------------|---|
| A. General Hazard | Cell is not flammable. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide. |
| B. Extinguishing Media | Use extinguishing media suitable for the materials that are burning. |
| C. Special Firefighting Instructions | If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) may explode/vent. |
| D. Firefighting Equipment | Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear. |

6. ACCIDENTAL RELEASE MEASURES

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|--|--|
| A. Protective equipment & Emergency procedures | Give special attention to chemical materials and conditions that must be avoided. |
| B. Environmental precautions | Prevent the inflow of this product to waterways, drains, basements, and conned spaces. |
| C. Purification / Removal Method | Dispose of the product as medical waste. |

7. HANDLING AND STORAGE

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|--------------------------------|--|
| A. Safe handling | Follow all prevention measures on the SDS/labels. Handle and store with care. Give special attention to chemical materials and conditions that must be avoided. Wear personal protective equipment while handing the product. |
| B. Conditions for Safe Storage | Store in a cool, dry place. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- | | |
|---|-----|
| A. Exposure Limits for Chemical Substances & Biological Exposure Limits | N/A |
| B. System Design (Proper Engineering Controls) | N/A |
| C. Personal protective equipment | |
| Respiratory protection | N/A |
| Eye protection | N/A |
| Hand protection | N/A |
| Skin & body protection | N/A |

9. PHYSICAL/CHEMICAL PROPERTIES

| | |
|--|-----------|
| A. Appearance | |
| Composition | Solid |
| Color | N/A |
| B. Odor | N/A |
| C. Odor Threshold | N/A |
| D. pH | N/A |
| E. Melting point / Freezing point | N/A |
| F. Initial boiling point and boiling point range | N/A |
| G. Flash point | N/A |
| H. Evaporation rate | N/A |
| I. Flammability (solid, gas) | N/A |
| J. Upper / lower limit of ignition or explosion | N/A |
| K. Vapor pressure | N/A |
| L. Solubility | Insoluble |
| M. Vapor density | N/A |
| N. Specific gravity | N/A |
| O. n-octanol / water partition coefficient | N/A |
| P. Natural ignition temperature | N/A |
| Q. Decomposition temperature | N/A |
| R. Viscosity | N/A |
| S. Molecular Weight | N/A |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| A. Chemical Stability and Possibility of Hazardous Reaction | N/A |
| B. Conditions to avoid | Avoid exposure to heat, open flame. Do not puncture, crush or incinerate. |
| C. Incompatible materials | N/A |
| D. Hazardous decomposition or byproduct | None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released. |

11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.

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|---|-----|
| A. Possible routes of exposure | N/A |
| B. Information on harmful health effects / Acute toxicity (Symptoms related to the physical, chemical and toxicological characteristics) | |
| Oral | N/A |
| Dermal | N/A |
| Inhalation | N/A |
| Skin Corrosion/Irritation | N/A |
| Respiratory sensitization | N/A |
| Skin sensitization | N/A |
| Carcinogenicity | N/A |
| Industrial Safety and Health Act | N/A |
| Notification of the Ministry of Employment and Labor | N/A |
| IARC | N/A |
| OSHA | N/A |
| ACGIH | N/A |
| NTP | N/A |
| EU CLP | N/A |
| Germ cell mutagenicity | N/A |

| | |
|--|-----|
| Reproductive Toxicity | N/A |
| Specific Target Organ Toxicity (Single Exposure) | N/A |
| Specific Target Organ Toxicity (Repeated Exposure) | N/A |
| Aspiration Toxicity | N/A |

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

12. ECOLOGICAL INFORMATION

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. DISPOSAL CONSIDERATION

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|-----------------------------|---|
| A. Product Disposal | If stated in the Wastes Control Act, dispose of the contents and container accordingly. |
| B. Precautions for Disposal | Dispose of the content according to the related regulations. |

14. TRANSPORT INFORMATION

The rechargeable Lithium-Ion battery pack as stated in Appendix are made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 965 section II such that they can be transported as a NOT RESTRICTED (non-hazardous/non-dangerous) goods. However, if those lithium-ion battery packs are pack with or contained in an equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the latest edition of the IATA Dangerous Goods Regulations section II of either Packing Instruction 966 or 967 in order for that consignment to be declared as NOT RESTRICTED (non-hazardous/non-Dangerous).

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions (2011-2012 Edition),
- The International Air Transport Association (IATA) Dangerous Goods Regulations (52nd Edition, 2011)
- The International Maritime Dangerous Goods (IMDG) Code (2010 Edition),
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) Sections 173-185 Lithium batteries and cells,
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, 5th revised edition
- UN No. 3480

15. REGULATORY INFORMATION

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|--|-----|
| A. Regulations according to the Industrial Safety and Health Act | N/A |
| B. Regulations according to the Toxic Chemicals Control Act | N/A |
| C. Regulations according to the Safety Control of Dangerous Substances Act | N/A |
| D. Regulations according to the Safety Wastes Control Act | N/A |
| E. Other regulations according to domestic and foreign laws | |
| - Follow the regulations of the KFDA (Korea Food & Drug Administration). | |
| - Follow the regulations of the Directive 93/42/EEC and 2007/42/EC. | |

16. OTHER INFORMATION

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|--------------------------------------|--------------|
| A. Source of Data | N/A |
| B. Date of Creation | 03 Feb. 2020 |
| C. Revision Number and Revision Date | |
| Revision Number | 0 |
| Date of Last Revision | - |
| D. Other Information | N/A |

The information and recommendations are taken from sources (raw material SDS(s) and manufacturer's knowledge) believed to be accurate and reliable. It is intended to describe the product according to various safety requirements; however, the manufacturer makes no warranty with respect to the accuracy and completeness of the information or the suitability of the recommendation and assumes no liability to any user thereof.