













# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006

## **Section 9: Physical and Chemical Properties**

Physical State:	Solid	Vapor Pressure (mm Hg @ 20°C):	Not applicable
Appearance:	Cell	Vapor Density:	Not applicable
pH:	Not applicable	Solubility in Water:	Insoluble
Relative Density:	Not available	Water / Oil distribution coefficient:	Not applicable
Boiling Point:	Not applicable	Odor Type:	Odorless
Melting Point:	Not applicable	Odor Threshold:	Not applicable
Viscosity:	Not applicable	Evaporation Rate:	Not applicable
Oxidizing Properties:	Not applicable	Auto Ignition Temperature (°C):	Not applicable
Flash Point and Method (°C):	Not applicable	Flammability Limits (%):	Not applicable
Octanol/Water Partition Coefficient	Not applicable	Decomposition Temperature	90°C

## **Section 10: Stability and Reactivity**

Stability: Sealed and normally functioning power cells are considered stable.

Conditions to Avoid: Avoid exposing the cell to fire or temperatures above 80°C. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.

Incompatible Materials: Do not immerse in water or other high conductivity liquids.

Hazardous Decomposition Products: This material may release toxic fumes if burned or exposed to fire. Breaching of the cell enclosure may lead to generation of hazardous fumes which may include extremely hazardous hydrofluoric acid.

Possibility of Hazardous Reactions: Not available.

## **Section 11: Toxicological Information**

Acute Toxicity Data: Acute oral, dermal and inhalation toxicity data are not available for this article.

Other Toxicity Data: Not applicable.

Irritation: Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.

Corrosivity: Not applicable.

Sensitization: Not applicable.

Neurological Effects: Not applicable.

Genetic Effects: Not applicable.

Reproductive Effects: Not applicable.

Developmental Effects: Not applicable.

Target Organ Effects: Not applicable.

Carcinogenicity: Normal safe handling of this product will not result in exposure to substances that are considered human carcinogens by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists), OSHA (Occupational Safety and Health Administration) or NTP (National Toxicology Program).



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## **Section 12: Ecological Information**

Ecotoxicity:	Not applicable
Mobility:	Not applicable
Persistence and degradability:	Not readily biodegradable
Bioaccumulative potential:	Not applicable
Other adverse effects:	Solid cells released into the natural environment will slowly degrade and may release harmful or toxic substances. Cells are not intended to be released into water or on land but should be disposed or recycled according to local regulations.

## **Section 13: Disposal Considerations**

Waste Disposal Method:	Cell recycling is encouraged. Do NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.
USA:	In the United States, dispose of in accordance with local, state and federal laws and regulations. Consult universal/hazardous waste regulations for further information regarding disposal of spent batteries. If a battery is leaking/broken open, consult hazardous waste regulations under US Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA). Also, consult state and local regulations for further disposal requirements.
Canada:	Dispose of in accordance with local, provincial and federal laws and regulations.
EU:	Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

## **Section 14: Transport Information**

Lithium Werk's lithium-ion cells and batteries are designed to comply with all applicable shipping regulations as prescribed by industry and legal standards which includes compliance with the UN Recommendations on the Transport of Dangerous Goods; IATA Dangerous Goods Regulations 62<sup>nd</sup> edition and applicable U.S. DOT regulations for the safe transport of lithium-ion batteries and the International Maritime Dangerous Goods Code 39-18. Each of the listed cells in Section 1 has either passed the UN Manual of Tests and Criteria Part III Subsection 38.3 or they belong to prototype and low production, for which the UN38.3 tests are not required by the regulations listed above.

In the US, shipments of lithium ion cells and batteries are classified as Class 9, UN3480 or UN3481 if shipped when the batteries are contained in or packed with equipment, by the U.S. Hazardous Materials Regulations (HMR). Packaging, markings and documentation requirements are defined in Title 49 of the Code of Federal Regulations (CFR), Section 173.185 of the U.S. HMR. Excepted cells and batteries are allowed to be transported within the US without Class 9 packaging and markings, but must conform to other requirements as stipulated in the 49 CFR Section 173.185 of the U.S. HMR.

International shipments of lithium ion cells and batteries are generally classified as Class 9, UN3480 or UN3481 if shipped when the batteries are contained in or packed with equipment, by the Recommendations on the Transport of Dangerous Goods Model Regulation of United Nations, International Civil Aviation Organization (ICAO) and the International Maritime Dangerous Goods (IMDG) Code. Packaging, markings and documentation requirements are defined in the International Air Transport Association (IATA) Dangerous Goods Regulations (DGR) PI965, PI966, PI967 or PI910 and P903, LP903 and P910 of the IMDG Code. Excepted cells and batteries are allowed to be transported internationally without UN-certified packaging when meeting ICAO, IATA, IMDG/IMO and 49 CFR and in some circumstances markings are simplified, too. But they must conform to other requirements as stipulated in PI965, PI966 or PI967 of the IATA DGR and Special Provision 188 under the Recommendations on the Transport of Dangerous Goods Model



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Regulation of United Nations and IMDG Code. Air shipping of lithium battery cells when they are not UN38.3 tested, i.e. prototypes and low production cells, must first get the Competent Authority’s approval of the originating country per SP A88 of IATA’s DGR.

## Section 15: Regulatory Information

### USA

TSCA Status: All ingredients in the product are listed on the TSCA inventory.  
 SARA Title III: None  
 Sec. 302: None  
 Sec: 304: None  
 Sec. 311/312: None  
 Sec. 313: None  
 CERCLA RQ: None  
 California Prop 65 This product complies with the requirements of California Proposition 65.

### Canada

Controlled Products Regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations  
 WHMIS Classification Not Controlled  
 New Substance Lithium hexafluorophosphate is listed on the Non-Domestic Substances List (NDSL). All other ingredients in the product are listed, as required, on Canada’s Domestic Substances List (DSL).  
 Notification Regulations  
 National Pollutant Release Inventory (NRPI) This product does not contain any NPRI chemicals.  
 Substances

### European Union

Classification for the Substance/Preparation This product is not classified as hazardous according to Regulation (EC) No. 1272/2008. Keep out of the reach of children.

### International

IATA This product meets all IATA Dangerous Goods Regulations (DGR) – up to 62<sup>st</sup> edition (2021)  
 IMDG Code This product meets all requirements of IMDG Code up to 39-18

## Section 16: Other Information

Revision Summary: May 10, 2018:  
 Release of document  
 Dec 29, 2018  
 In Section 14: change IATA’s DGR from 59<sup>th</sup> to 60<sup>th</sup>.  
 Jan 6, 2020:  
 Release of document  
 Feb 27,2020:  
 In Section 14: change IATA’s DGR from 60<sup>th</sup> to 61<sup>th</sup>.  
 March 30, 2020  
 Updated company logo  
 Jan 06,2021:  
 In Section 14: change IATA’s DGR from 61<sup>th</sup> to 62<sup>th</sup>.  
 In Section 15: change IATA’s DGR from 61<sup>st</sup> edition (2020) to 62<sup>st</sup> edition (2021)





Product Name: Lithium Ion  
Battery Cell  
Revision Date: May 1,2021

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**Manufacturer Disclaimer:** The information and recommendations set forth are made in good faith and believed to be accurate at the date of preparation.