

## BATTERY INFORMATION SHEET SUNLIGHT LITHIUM ION BATTERY

### 1. IDENTIFICATION

- 1.1 Product** Lithium Ion Battery  
Trade name: SUNLIGHT Li-Ion BATTERY all Sizes
- 1.2 Usage** Energy Storage (Battery) for Industrial use.
- 1.3 Supplier**  
Name: SYSTEMS SUNLIGHT S.A.  
Address: 8 Thivaidos & Sfiggos 14 564 Kifissia, Greece  
Phone/Fax: +30 210 6245400 / +30 210 6245409  
Factory Name: SUNLIGHT MANUFACTURING PLANT  
Address: 67 200 Neo Olvio Xanthi  
Phone/Fax: +30 25410 48100 / +30 25410 95446
- 1.4 Contact in case of emergency**  
Emergency contact: Tel +30 25410 48100  
Internet: [www.systems-sunlight.com](http://www.systems-sunlight.com) section "contact"

### 2. HAZARD IDENTIFICATION

Li-ion battery is a sealed article with no intended release of its substances.

Under normal conditions of use, the battery does not release its content as it is sealed.

**Hazards Identification:**

Class 9A, miscellaneous. The cell has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN 38.3

**Emergency Overview:**

Avoid contact and inhalation the electrolyte contained inside the cell and/or battery.

Hazard pictograms



Signal word

Danger

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Hazard statements	H226: Flammable liquid and vapour H314: Causes severe skin burns and eye damage H335: May cause respiratory irritation
Precautionary statements	P261: Avoid breathing vapours P280: Wear protective gloves/protective clothing/eye protection /face protection P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor

### 3. COMPOSITION & INFORMATION ON INGREDIENTS

#### Classification of dangerous substances contained into the product

Each battery contains Lithium Ion cells. Each cell contains a number of chemicals and materials of construction of which the following could potentially be hazardous upon release.

Ingredient	CAS No	EC No	Content (wt %)
Lithium Iron phosphate	15365-14-7	-----	< 26
Graphite	7782-42-5	231-955-3	< 14
Copper	7440-50-8	231-159-6	< 10
Aluminum	7429-90-5	231-072-3	< 6
Lithium Hexafluorophosphate	21324-40-3	244-334-7	< 3
Polypropylene	9003-07-0	-----	< 26
other	-----	-----	rest

### 4. FIRST AID MEASURES

*Measures in case of accidental release of the battery content (spillage in absence of fire)*

<b>Skin contact</b>	Immediate medical attention is required. Wash off immediately with plenty of water for at least 15-20 minutes, as necessary.
<b>Eye contact</b>	Immediate medical attention is required. Remove contact lenses. Rinse immediately with plenty of water for at least 15-20 minutes, as necessary
<b>Ingestion</b>	Immediate medical attention is required. Gently wipe or rinse the inside of the mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or a Poison Control Centre immediately.
<b>Inhalation in non-fire situations.</b>	Immediate medical attention is required. Move to fresh air. If symptoms persist, call a physician.

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### 5. FIRE-FIGHTING MEASURES

The potential hazard offered by damaged lithium batteries in absence of fire is mainly the release of a electrolyte containing a corrosive salt. Reaction of the electrolyte with water/humidity may generate hydrofluoric acid and irritate the eyes, nose, throat and skin.

**Extinguishing Media:**

Suitable: Dry chemical, Sandy soil, Carbon dioxide or appropriate foam.

**Personal precautions**

Use personal protective equipment. Avoid contact with skin and eyes. Ventilate the area. Position yourself in the wind direction.

The information below refers to exposure to the substances contained in the battery.

- **Respiratory track protection**  
*Protective mask for acidic vapors or Self Contained Breathing Apparatus.*
- **Hand protection**  
*Neoprene gloves or equivalent.*
- **Eye protection**  
*Safety glasses with side-shields or equivalent.*
- **Skin and body protection**  
*Boots, apron, long sleeved clothing.*
- **Hygiene measures**  
*General industrial hygiene practice.*

### 6. ACCIDENTAL RELEASE MEASUREMENTS

**Individual Precautions:** Evacuate the employees from the contaminated area until fumes dispersal. In case of electrolyte leakage from a battery, do not inhale the gas as possible. In case of skin or eye contact, inhalation or ingestion, follow the measures described in section 4.

**Environmental Precaution:** Eliminate all possible sources of heat or ignition. Prevent further leakage or spillage if safe to do so (use absorbent cloth or other inert absorbent non-conductive material mineral such as sand, sodium bicarbonate, alumina or vermiculite). Dry clothes can also be used as a absorbent material in absence of fire. Do not allow material to contaminate ground water system

**Ways of Cleaning:** Wearing protective glasses and gloves, use absorbent material (sand, earth or vermiculite) to absorb any exuded material. Seal leaking battery (unless hot) and contaminated absorbent material in plastic bag and dispose of as Special waste in accordance with local regulations.

### 7. HANDLING AND STORAGE

The Lithium Iron Phosphate battery describes in this Battery Information Sheet is not hazardous when used according to the recommendations of the manufacturer.

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#### **Storage**

Keep in a dry, cool and well-ventilated place,

Recommended storage temperatures: 10°C – 30°C

Max. storage temperature range: -30°C – 45°C

Never allow temperatures above 60°C.

Keep away from heat sources (max 60°C) and sources of ignition. Protect from direct exposure to sunlight.

Keep away from water and condensation.

Store in such a way to prevent short circuits and damages during storage or transportation.

In case of mixed storage of goods and articles, organize separate storage area for lithium-ion batteries.

Store in limited quantities and in isolated area under external surveillance, unless specifically designed storage building (detectors and/or sprinklers protection systems).

Safety measures for storage shall be organized with the relevant safety team.

#### **Handling:**

The warning sign of the High Voltage requires.



#### **- Safe handling advice**

When handling the batteries, use personal protective equipment (gloves), specifically to avoid short-circuits between the battery poles.

#### **- Technical measures/precautions.**

Follow the instructions reported in the user's manual prepared by SUNLIGHT.

Do not short (+) or (-) battery terminals with conductors, do not allow battery terminals to contact each others.

Do not use unadapted charging systems.

Do not reverse the polarity,

Do not mix different types of batteries or mix new and old ones together e.g. in a power pack,

Do not open the battery system or modules,

Do not use the unit without its electronic management system,

Do not submit to static electricity risks to avoid damages to the protecting electronic circuit,

Do not submit to excessive mechanical stress,

Do not expose the battery to water or humidity (avoid water condensation),

Do not expose to heat, solder or throw into fire. Such unsuitable use can cause leakage or evacuate through a safety valve gaseous electrolyte fumes that may cause fire,

Immediately disconnect the batteries and isolate in a safe place if, during operation, they emit an unusual smell, develop heat, change shape/geometry, or behave anomalously. Contact the manufacturer if any of these problems are observed.

#### **Other**

Follow SUNLIGHT recommendations regarding maximum recommended currents and operating temperature range.

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### 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

The following prevention measures should be taken when approaching a high voltage battery or rescue a victim.



***Use insulating gloves and appropriate protective clothing***

***Turn off the source of electricity, if possible.*** If not, move the source away from you and the person (victim), using a dry, non-conducting object made of cardboard, plastic or wood. Check for signs of life (breathing, coughing or movement). Call a doctor immediately.

***Prevent shock.*** Lay the person down and, if possible, position the head slightly lower than the body with the legs elevated.

***After coming into contact with electricity,*** the person should see a doctor to check for internal injuries, even if he or she has no obvious signs or symptoms.

### 9. PHYSICAL & CHEMICAL PROPERTIES

The batteries described by this Battery Information sheet are manufactured “articles” and does not expose the user to hazardous chemicals when used in accordance with manufacturer specifications.

*Shape* Metal tray with cover.

### 10. STABILITY & REACTIVITY

Batteries are stable when handled and stored according to section 7.

***Hazardous Reactions:***

At temperatures above 60°C risk of bursting and withdrawal of electrolyte.

Risk of reactions of electrolyte and/or the electrodes with water or humidity.

***Hazardous Decomposition Products:***

Hydrogen (H<sub>2</sub>) and lithium hydroxide dust are produced in case of reaction with water.

***Materials to Avoid:*** Strong oxidizing agents, Corrosives.

***Conditions to Avoid:*** Do not heat above the temperature given to section 7. Prevent short circuits. Do not disassemble, crush, pierce, short, charge or recharge. Avoid mechanical or electrical abuse.

### 11. TOXICOLOGICAL INFORMATION

No toxicological impacts are expected under normal use conditions. There is no risk, unless the battery ruptures. In the event of accidental exposure to internal contents, may cause irritation to eyes and skin.

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### 12. ECOLOGICAL INFORMATION

#### **Waste treatment**

Directive 2006/66/EC on batteries and accumulators, and waste batteries and accumulators, and Commission Regulation EU 493/2012 applies.

Dispose of waste batteries in accordance with national legislation. When collected waste batteries must undergo recycling to comply with national regulations. Batteries should not be disposed of into the environment.

#### **Further information**

According to the European Waste Catalogue (EWC), Waste Codes are not product specific, but application specific. EWC-codes according waste disposal 16 06 05, other batteries & accumulators.

### 13. DISPOSAL CONSIDERATIONS

Requirements for Lithium –Ion batteries placed on the European Union market in accordance with the Batteries Directive 2006/66/EC, Regulation 1103/2010 and Directive 2023/56/EU, and corresponding national laws. The batteries have to be marked with the crossed wheel bin symbol



and may be submitted to specific conditions for collection and recycling.

According to the document "QUESTIONS AND ANSWERS ON THE BATTERIES DIRECTIVE (2006/66/EC)" published by the EU Commission (page 23), the Batteries Directive applies also to battery packs.

### 14. TRANSPORT INFORMATION

*Li-ion batteries are classified as Dangerous Goods for transport according to the UN Model regulation for the Transport of Dangerous Goods.*

#### **ADR/RID**

Class 9A Packing group N/A, tunnel category E ADR/RID-Labels 9

Proper shipping name Lithium-Ion batteries, UN 3480

*ADR Special Provisions 230, 310, 348 will apply and Packing Instruction P903 and P910.*

#### **IMO**

Class Packing group N/A IMO-Labels 9

Proper shipping name Lithium-Ion batteries, UN 3480

*IMDG Code: Special provisions 230, 310 and packing instructions P903*

*EmS: F-A, S-I*

*Stowage category A*

#### **IATA-DGR**

Class Packing group N/A ICAO-Labels 9

Proper shipping name Lithium-Ion batteries, UN 3480 *IATA: Special provisions A88, A99, A154, A164, A181, A182, A183 packing instructions P965, P966, P967*

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#### **15. REGULATORY INFORMATION**

Marking Consideration

European Union: According to directive 2006/66/EC, the batteries have to be marked with the crossed wheel bin symbol.

#### **16. OTHER INFORMATION**

According to Reach regulation (EC 1907/2006, Art31) batteries are articles with no intended release. As such, they are not covered by legal requirements to generate and supply an SDS or an MSDS. This Battery Information Sheet is provided solely as an information document for the purpose of assisting our customers.

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, neither exhaustively nor perfect reliability can be granted. Information does not imply implicit or specific warranty of it.

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