

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 PRODUCT IDENTIFIER

Product Name RECHARGEABLE LITHIUM ION BATTERY MODULE

Synonym(s) DUR-BAT-024  
DURACELL RECHARGEABLE LITHIUM ION BATTERY MODULE

#### 1.2 USES AND USES ADVISED AGAINST

Use(s) BATTERIES

#### 1.3 DETAILS OF THE SUPPLIER OF THE PRODUCT

Supplier name SOCIAL ENERGY AUSTRALIA PTY LTD  
Address Tower 3, Level 38, 300 Barangaroo Ave, Sydney, NSW 2000, AUSTRALIA  
Telephone 1300 324 916  
Email aus.support@social.energy  
Website [https:// www.social.energy/australia/](https://www.social.energy/australia/)

#### 1.4 EMERGENCY TELEPHONE NUMBER(S)

Emergency 0424 406 779

### 2. HAZARDS IDENTIFICATION

#### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Class 9 – Lithium Batteries

#### 2.2 LABEL ELEMENTS



#### 2.3 OTHER HAZARDS

Explosive risk During normal use, there is no explosive risk.

Flammable risk During normal use, there is no risk of flammability. If exposed to a fire, the gas release vent will operate, and the battery casing may be breached.

Oxidation risk In normal operation, there is no oxidation risk.

Toxic risk In normal operation, there is no toxic risk. In abnormal events such as fires or extreme physical damage, harmful fumes may be emitted.

Radioactive risk In normal operation, there is no radioactive risk.

Other risk Stored Energy - 2400Wh of Energy is stored in each battery Module.

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

#### 3.1 SUBSTANCES / MIXTURES

Ingredient	Content %	CAS Number	Remark
Lithium Iron Phosphate (LiFePO <sub>4</sub> )	25 - 35	15365-14-7	--
Carbon	12 - 22	7440-44-0	--
Electrolyte - LiPF <sub>6</sub>	18 - 25	21324-40-3	--
Electrolyte - Solvent		/	--
PP / PE	0.5 - 5	9003-07-0	--
Copper	10 - 18	7440-50-8	--
Aluminium	10 - 20	7429-90-5	--

### 4. FIRST AID MEASURES

#### 4.1 DESCRIPTION OF FIRST AID MEASURES

Eye	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes.
Inhalation	Remove from exposure and move to fresh air immediately. Use oxygen if available.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious.

#### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Adverse effects not expected from this product. Exposure to battery contents may cause irritation and potential burns.

#### 4.3 IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

#### 5.1 EXTINGUISHING MEDIA

In case of fire suitable extinguishing media: Carbon Dioxide (CO<sub>2</sub>) or water.

#### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Flash Point: Not applicable  
Auto-Ignition Temperature: Not applicable

Cell contents may leak or explode, if exposed to high temperatures, due to pressure accrual in the sealed battery casing. Toxic or flammable vapour may be emitted.

#### 5.3 ADVICE FOR FIREFIGHTERS

Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Cell may vent when subjected to excessive heat exposing battery contents. Disconnect switches where possible. If Fire is near the battery (but not involving the battery), switch off the Battery system and remove the fuse in the base of the unit. Do not approach if flooded. Do not hose or allow water to contact battery materials.

#### **5.4 HAZARDOUS COMBUSTION PRODUCTS**

Carbon Monoxide, Carbon Dioxide, Lithium Oxide fumes.

### **6. ACCIDENTAL RELEASE MEASURES**

#### **6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the MSDS.

#### **6.2 ENVIRONMENTAL PRECAUTIONS**

Prevent product from entering drains and waterways.

#### **6.3 METHODS OF CLEANING UP**

If the battery material is released, remove personnel from the area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe up spills with a cloth and dispose of it in a plastic bag and put into a steel container. The preferred response is to leave the area and allow the battery to cool and vapours to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapours. Contain spills, then remove spilled liquid with absorbent material.

#### **6.4 REFERENCE TO OTHER SECTIONS**

See Sections 8 and 13 for exposure controls and disposal.

### **7. HANDLING AND STORAGE**

#### **7.1 PRECAUTIONS FOR SAFE HANDLING**

The battery should not be opened, destroyed or incinerated, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, force over-discharge, or throw into fire. Do not crush or puncture the battery or immerse in liquids.

#### **7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

Avoid mechanical or electrical abuse. Store in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures (>45°C) should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

#### **7.3 SPECIFIC END USE(S)**

The battery may explode or cause burns if disassembled, crushed or exposed to fire or high temperatures. Do not short-circuit the terminals or install with incorrect polarity.

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **8.1 NORMAL USE**

Engineering controls                      Use in well ventilated areas.

PPE:

Eye/Face	Not required under normal conditions of use.
Hands	Not required under normal conditions of use.
Body	Not required under normal conditions of use.
Respiratory	Not required under normal conditions of use.

#### **8.2 INSTALLATION**

PPE:

Eye/Face	Not required under normal conditions of use.
Hands	Wear PVC or rubber gloves.
Body	Not required under normal conditions of use.
Respiratory	Not required under normal conditions of use.
Footwear	Wear rubber-soled or rubber constructed footwear.



### **8.3 ACCIDENTAL RELEASE OF CELL CONTENTS**

PPE:

Eye/Face	Wear safety glasses with side shield.
Hands	Wear protective gloves.
Body	Wear protective clothing.
Respiratory	Use Self Contained Breathing Apparatus (SCBA).

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Quadrate shape.
Odour	If leaking, smells of medical ether.
Flammability	Not applicable unless individual components exposed.
Flash point	Not applicable unless individual components exposed.
pH	Not available as supplied.
Relative density	Not applicable unless individual components exposed.
Solubility (water)	Not applicable unless individual components exposed.
Solubility (other)	Not applicable unless individual components exposed.

## **10. STABILITY AND REACTIVITY**

### **10.1 STABILITY**

Product is stable under conditions described in Section 7.

### **10.2 CONDITIONS TO AVOID**

Heating above 70°C or incinerating. Deforming. Mutilation. Crushing. Piercing. Disassembly. Overcharge, Short circuit. High Humidity over extended periods.

### **10.3 MATERIALS TO AVOID**

Oxidising agent, alkalis, water.

### **10.4 HAZARDOUS DECOMPOSITION PRODUCTS**

Toxic fumes and may form peroxides.

### **10.5 HAZARDOUS POLYMERISATION**

Not applicable.

### **10.6 OTHER**

If leaking, avoid materials coming into contact with strong oxidisers, mineral acids, strong alkalies, water and/or halogenated Hydrocarbons.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 INFORMATION ON TOXICOLOGICAL EFFECTS**

Signs & Symptoms	None, unless battery ruptures. In the event of exposure to internal content, vapour fumes may be very irritating to the eyes and skin.
Inhalation	Not an irritant unless cells rupture, in which case; Lung Irritant.
Skin contact	Not an irritant unless cells rupture, in which case; Skin Irritant.
Eye contact	Not an irritant unless cells rupture, in which case; Eye Irritant.

Ingestion                      Poisonous if internal cell contents swallowed. Medical conditions generally aggravated by exposure: In event of exposure to internal contents, moderate to severe irritation, burning and dryness of the skin may occur. Target Organs nerves, liver and kidneys.

## 12. ECOLOGICAL INFORMATION

### 12.1 MAMMALIAN EFFECTS

None known at present.

### 12.2 ECO-TOXICITY

None known at present.

### 12.3 BIOACCUMULATIVE POTENTIAL

Very slowly Bio-degradable. No definitive information on bio-accumulative potential at the time of this review.

### 12.4 ENVIRONMENTAL FATE

No known environmental hazards at present.

### 12.5 OTHER ADVERSE EFFECTS

No information provided.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 WASTE TREATMENT METHODS

Waste disposal	Reuse or recycle where possible. Return to manufacturer/supplier. Contact your state EPA or the manufacturer for additional information.
Legislation	Dispose of in accordance with relevant local legislation.
Other	Do not incinerate, or subject to temperature in excess of 70°. Such abuse can result in loss of seal leakage, and/or cell explosion.

## 14. TRANSPORT INFORMATION

Label for conveyance	Class 9 Hazard Labels, Cargo Aircraft only
UN Number	UN3480
Packing Group	II
EmS No.	F-A, S-I
Marine pollutant	No
Proper Shipping name	Lithium ion batteries
Hazard Classification	The goods shall comply with the requirements of IMDG CODE (Amdt. 39-18) Edition and Packing Instructions section IA of 965 of 61st DGR Manual of IATA (2020 edition), including passing of the UN38.3 test.

## 15. REGULATORY INFORMATION

### 15.1 LEGAL, SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/SPECIFICATIONS

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 Substance Control Act (TSCA)

Consumer Product Safety Act (CPSA)  
Federal Environmental Pollution Control Act (FEPCA)  
The Oil Pollution Act (OPA)  
Superfund Amendments and Reauthorisation 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)  
Criteria for classifying hazardous materials (NOHSC: 1008(2004)  
Australian Inventory of Chemical Substances) - All components are listed or exempt.  
In accordance with all Federal State and local laws.

## 16. OTHER INFORMATION

### ADDITIONAL INFORMATION

This file relates only the battery modules (Model: DUR-BAT-024) commissioned by SE Group Ltd. Social Energy Australia provides the composition information of batteries and promises its integrity and accuracy to the best of our knowledge.

Users should read this file carefully and use the batteries in the correct method. The Manufacturer of Importer/Reseller does not assume responsibility for any damage or loss because of misuse of the batteries.

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[End of MSDS]