Product Safety Data Sheet	Document No.	
	Issue	01.05
	Date Last Amended	Jan 2020
	Last Amended by	DCS
Document Title	LB8E Lithium Battery PSDS	

Product Name:	Lithium Battery Pack			**Type №:**	LB8E
For use with:	RescueME EPIRB1				
Chemistry:	$LiMnO_2$	**Total Weight:**	51g	**Nominal Voltage:**	9V
Construction:	The EPIRB1 contains two batteries, each containing three Q-Lite Industrial Ltd. CR123 cells connected in series. The batteries are isolated from each other for transportation.				
Lithium weight/cell:	0.51g	**Total lithium weight/battery:**		1.53g	

Section 1 – Manufacturer Information

Manufactured by: Ocean Signal Ltd.

Section 2 – Hazards Identification

This battery module is a self-contained unit. In this condition there are no hazards identified. Should the battery be damaged to cause leakage of the cell contents, the following hazards should be noted.

Ingestion: Swallowing the contents of a damaged battery can be harmful

Inhalation: Contents of a damaged battery can cause respiratory irritation

Skin Contact: Contents of a damaged battery can cause irritation

Eye Contact: Contents of a damaged battery can cause severe irritation

Section 3 – Ingredients

Important Note: This battery should not be opened or burned. Exposure to the contents may be harmful.

Material or Ingredient	PEL (OSHA)	TLV (ACGIH)	%/wt.
Lithium (CAS# 7439-93-2)	None Established	None established	2 to 3
Lithium perchlorate (CAS# 7791-03-9)	None Established	None Established	3 to 4
Carbon (CAS# 7440-44-0)	None Established	None Established	<1.0
Manganese Dioxide (CAS# 1313-13-9)	5mg/m^3 Ceiling (as Mn)	0.2mg/m^3 TWA (as Mn)	30 to 40
1,2-Dimethoxyethane (CAS# 110-71-4)	None Established	None Established	3 to 4
Propylene Carbonate (CAS# 108-32-7)	None Established	None Established	3 to 4

Material or Ingredient	PEL (OSHA)	TLV (ACGIH)	%/wt.
Non Hazardous Components			
Stainless Steel (CAS#12597-68-1)	None Established	None Established	25 to 35
Other	None Established	None Established	Remainder

Section 4 – First Aid Measures

Ingestion: If a battery is swallowed, consult a physician immediately.

If contents come into contact with the mouth, immediately rinse by plenty of water and consult a physician.

Inhalation: Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.

Skin Contact: Immediately flush skin with plenty of water. If itch or irritation by chemical burn persists, consult a physician.

Eye Contact: Immediately flush eye with plenty of water for at least 15 minutes. And consult a physician immediately.

Section 5 – Fire Fighting Measures

In case of fire involving lithium batteries, flood the area with water or smother with a class D fire extinguishing material suitable for lithium metal. (e.g. Lith-X)

Note: Water may not completely extinguish burning lithium batteries but will keep adjacent batteries cool reducing the risk of the fire spreading. As burning batteries will burn themselves out, flooding with water will control virtually all fires involving lithium batteries. However, the contents of lithium batteries will react with water to release hydrogen gas. In enclosed spaces this can cause an explosive mixture. Use a smothering agent in enclosed spaces which will extinguish burning lithium batteries.

Fire responders should wear self contained breathing apparatus. Burning lithium manganese dioxide batteries produce toxic and corrosive lithium hydroxide fumes.

Section 6 - Accidental Release Measures

Should batteries leak the following actions are recommended.

Ventilation: Keep room containing leaking lithium batteries well ventilated

Respiratory Protection: Avoid exposure to fumes from open or leaking batteries

Eye protection: Wear safety glasses with side shields when handling leaking batteries

Gloves: Neoprene of natural rubber gloves should be worn when handling leaking batteries

Storage: Leaking batteries should be stored in a leak proof container

Section 7 – Handling and Storage

Storage: Store in a cool, well ventilated area. Elevated temperature may result in shortened battery life.

Handling: Never swallow.

Never reverse the positive and negative terminals when mounting.

Never short-circuit the battery.

Never expose to open flame or expose the battery to heat.

Never disassemble.

Never touch liquid that may have leaked out of battery.

Never touch battery for an extended period of time.

Charging: These batteries are not designed for charging. Do not attempt to recharge the battery. Recharging may result in cell venting or rupture.

Section 8 – Exposure Controls / Personal Protection

No special requirements are required for this battery under normal circumstances.

Section 9 – Physical and Chemical Properties

Boiling Point at 760mm Hg (°C)	Not applicable for this item
Vapour Pressure (mm Hg at 25°C)	Not applicable for this item
Vapour Density	Not applicable for this item
Density (g/cm^3)	
Percent volatile by volume (%)	Not applicable for this item
Evaporation Rate	Not applicable for this item
Physical State	Solid
Solubility in water	Not applicable for this item
pH	Not applicable for this item
Appearance and odour	Solid object / no odour

Section 10 – Stability and Reactivity

No stability or reactivity issues identified

Section 11 – Toxicological Information

This battery module is not classified as hazardous waste. This battery module has been manufactured in accordance with the EU ROHS directive, 2011/65/EU.

Section 12 – Ecological Information

No ecological issues have been identified for this battery

Section 13 – Disposal Considerations

Dispose of battery module in accordance with applicable local regulations

Section 14 – Transport Information

This battery module has been tested in accordance with subsection 38.3 of part III of the UN Manual of Tests and Criteria. The Lithium content of the each LB8E battery is less than 2grams. Summary test reports are available from Ocean Signal on request.

This battery module should be transported by air in accordance with the IATA dangerous goods regulations 61st edition, class 9, UN3090, proper name "Lithium metal batteries" and packed according to packing instruction 968 section II (one replacement battery kit only) or section Ib.

When supplied with equipment it is class 9, UN3091, proper name "Lithium metal batteries contained in equipment" and should be packed in accordance with packing instruction 970 section II.

The EPIRB1 can be carried as personal luggage on board aircraft under the conditions of clause 2.3.5.9 of the IATA regulations.

The battery modules may be transported by road under special provision 188 of the ADR.

Section 15 Regulatory Information

No additional regulatory requirements are identified for this battery module.

Section 16 – Other

No information

EC Declaration of Conformity

We, Ocean Signal Ltd., hereby declare that the following specified equipment complies with Directive 2014/90/EU (Marine Equipment) and has been assessed in accordance with MED/5.6 of EU implementing regulation (EU)2020/1170.

Equipment Description: Emergency Position Indicating Radio Beacon ....

Type: EPIRB1 Pro, rescueME EPIRB1 .....

Manufactured by: Ocean Signal Ltd. .....

Address: Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom,.....

This equipment has been tested to verify compliance with the following Regulations and Testing Standards:

IEC61097-2 Ed. 3.0, Jan 2008, IEC60945 Ed. 4, Aug 2002 inc. Corrigendum. 1, Apr 2008 .....

Cospas Sarsat T.001, T.007 .....

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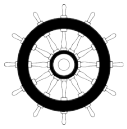
Module B Type Examination Certificate No...... 202120003/AA/00

Issued by: .....Telefication B.V. (0560)

Module D Surveillance Certificate DK-MED005708-H1

Issued by ..... TÜV SÜD BABT (2443)

Product affixed with the following marks and identification:  **2443**
YY

A Technical Construction File for this equipment is retained at the following address:

Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom

Authorised Representative:

Mr. K Nieuwenhuis, Ocean Signal Ltd., Melkbon 39, 1602 JD Enkhuizen, The Netherlands

Signed: D C Sheekey Date: 4th August 2021

Name: David Sheekey Position: Product & Approvals Manager

Address: Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom

Appointed by the manufacturer as the responsible person for signing this Declaration

EC Declaration of Conformity

We, Ocean Signal Ltd., hereby declare that the following specified equipment complies with Directive 2014/90/EU (Marine Equipment) and has been assessed in accordance with MED/5.6 of EU implementing regulation 2019/1397.

Equipment Description: Emergency Position Indicating Radio Beacon .....

Type: EPIRB1 Pro, rescueME EPIRB1 .....

Manufactured by: Ocean Signal Ltd. .....

Address: Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom, ...

This equipment has been tested to verify compliance with the following Regulations and Testing Standards:

IEC61097-2, IEC60945.....

Cospas Sarsat T.001, T.007 .....

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Module B Type Examination Certificate No. 142120003/AA/00

Issued by: .....Telefication B.V. (0560)

Module D Surveillance Certificate..... BABT-MED005708-H1

Issued by ..... TÜV SÜD BABT (0168)

Product affixed with the following marks and identification: **0168**
YY

A Technical Construction File for this equipment is retained at the following address:

Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom .....

Signed: D C Sheekey Date: 9th June 2020

Name: David Sheekey Position: Product & Approvals Manager

Address: Unit 4, Ocivan Way, Margate, CT9 4NN, United Kingdom

Appointed by the manufacturer as the responsible person for signing this Declaration