

SECTION 1: IDENTIFICATION.

Product Name.	<p>Smartfind EPIRB & Replacement Battery Packs</p> <p><u>EPIRB Model Descriptions:</u></p> <p>E5 Auto E5 Manual G5 Auto G5 Manual EG50:Auto EG50:Manual EP50:Auto EP50:Manual SGE406-II EPIRB with Auto Housing SE406-II EPIRB with Auto Housing SGE406-II EPIRB with Manual Bracket SE406-II EPIRB with Manual Bracket</p> <p><u>Battery Packs:</u></p> <p>82-970A LTB5</p>
Manufacturers Name.	McMurdo Limited
Address.	'Silver Point' Airport Service Road, Hilsea, Portsmouth, Hampshire PO3 5PB UK
Telephone No.	023 9262 3900
Fax.	023 9262 3998
Emergency No.	+ 44 (0) 1722 411611 (UK/ EU/USA and Rest of the World)
Date of Issue	Sept 2006
Issue No	01
Description	<p>McMurdo Smartfind EPIRBs are lithium powered marine safety beacons which are designed to be stored for up to five years before use. The EPIRB product contains three 9V battery packs each containing three cells. Each is a hermetically sealed pressurised primary Lithium/Manganese Dioxide cell and as supplied is electronically protected by a fuse and from external environment by a heat shrunk plastic casing. In this state the units constitute no definable hazard to health. However, disassembly, abuse or destruction of the battery cell will expose the contents and the following Health and Safety Hazards.</p>

SECTION 2: INFORMATION OF INGREDIENTS**Hazardous Components :**

	CAS No.	% optional	OSHA/PEL	ACGIH TLV
Lithium Metal	7439-93-2	3	n/a	n/a
Manganese Dioxide	1313-13-9	40	5 mg/m3	5 mg/m3
Propylene carbonate	108-32-7	9	n/a	n/a
1,2 Dimethoxy ethane	110-71-4	5	n/a	n/a
Lithium Perchlorate	7791-03-9	1.5	n/a	n/a
Lithium weight per cell			0.58g	
Lithium weight per individual battery pack			1.74g	

SECTION 3: HAZARD IDENTIFICATION

LITHIUM METAL: - This is flammable when in contact with water. It reacts violently to produce Hydrogen and Lithium Hydroxide. Use only Soda Ash, Sodium Chloride or Graphite to extinguish flame.

MANGANESE DIOXIDE: - A toxic material, also an irritant and an Oxidising Agent. Will irritate the eyes and skin and is harmful by ingestion. Use only CO2 or Halon to extinguish flame.

1, 2 DIMETHOXYETHANE: - Highly Flammable, Harmful to skin by absorption, Harmful if ingested or inhaled. Use only CO2 or Halon to extinguish flame.

PROPYLENE CARBONATE: - Will irritate the eyes & the skin by absorption and is harmful by inhalation. Use only CO2 or Halon to extinguish flame.

SECTION 4: FIRST AID MEASURES

EYES: Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention.

INHALATION: Remove from exposure, rest and keep warm. In severe cases, or if exposure has been great, Obtain medical attention.

SKIN: Drench the skin thoroughly with water. Remove contaminated clothing and wash before re-use. Unless Contact has been slight. Obtain medical attention.

INGESTION: Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical attention.

Other materials are either inert or have low hazard associated with their exposure.

SECTION 5: FIRE FIGHTING MEASURES.

If cells are directly involved in fire, DO NOT USE SAND, DRY POWDER OR SODA ASH, GRAPHITE, METAL, CLASS D EXTINGUISHERS OR A FIRE BLANKET.

EXTINGUISHING MEDIA: copious quantities of a water based foam.

In the case where significant quantities of Lithium/Manganese dioxide batteries have been involved in a fire, account must be taken of the possibility that flammable gases might be evolved should water come into contact with the cold battery residues. These gases might include Acetylene, Hydrogen, and Cyanide. It is recommended that ventilation should be maximised should this scenario be realised.

SECTION 6: ACCIDENTIAL RELEASE MEASURES.

Do not breathe vapours or touch liquid with bare hands. If the skin has come into contact with the electrolyte it should be washed thoroughly with water. Earth or sand should be used to absorb the exudation, seal leaking battery and earth in a heavy-duty Polythene bag and dispose of as special waste.

SECTION 7: HANDLING AND STORAGE.

Handle and store in cool well-ventilated area keep out of direct sunlight. Keep unit in the box until required to be fitted.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

HANDLING: Do not short circuit or expose to temperatures above the temperature rating of the battery. Do not recharge, over discharge, force discharge, immerse, puncture or crush.

STORAGE: Store in a cool place but prevent condensation on cells and batteries. Elevated temperatures can result in shortened battery life and degrade performance. Do not store batteries in high humidity environments for long periods.

External corrosion of the Nickel plated can and tags could result in the formation of toxic metal salts. Avoid ingestion; observe personal hygiene wash hands after contact.

External corrosion of the Nickel plated can and tags could result in the formation of toxic metal salts. Avoid ingestion, observe personal hygiene, wash hands after contact

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

Appearance	Beacon with flashing LEDs in an yellow/clear plastic housing containing 1 PCB and three battery packs.
Odour	If leaking, smells of medical ether.
Stability in Water	Product is waterproof.
Reaction with Water	Only if damaged.
Flash point:	Not applicable unless individual components exposed.
Flammability:	Not applicable unless individual components exposed.
Relative density:	Not applicable unless individual components exposed.
Solubility in water:	Not applicable unless individual components exposed.
Solubility other:	Not applicable unless individual components exposed.

SECTION 10: STABILITY AND REACTIVITY.

Hazardous materials are housed within a hermetically sealed unit. Under normal conditions this unit is Non-hazardous.

Hazardous reactions: Lithium metal reacts with water to produce highly flammable gasses.

Hazardous Decomposition Reaction: Toxic fumes, and may form peroxides

SECTION 11: TOXICOLOGICAL INFORMATION.

Signs & Symptoms	None unless battery ruptures. In event of exposure to internal contents, corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non - fibrotic lung injury and membrane irritation.
Inhalation	Lung irritant
Skin Contact	Skin irritant
Eye contact	Eye irritant
Ingestion	Poisoning if swallowed
Medical conditions generally aggravated by exposure	In the event of exposure to internal contents, eczema, skin allergies, lung injuries, asthma and other respiratory disorders may occur.

SECTION 12: ECOLOGICAL INFORMATION.

Mammalian effects: None known at present.
Eco-toxicity None known at present.
Bioaccumulation Potential: Slowly Bio-degradable.
Environmental Fate: No known environmental hazards at present.

SECTION 13: DISPOSAL.

Disposal **DO NOT INCINERATE** or subject cells to temperature in excess of 90°C. Such abuse can result in loss of seal, leakage, and/or cell explosion.

Dispose of in accordance with appropriate local regulations.

DO NOT ATTEMPT TO DISMANTLE THIS PRODUCT.

SECTION 14: TRANSPORT INFORMATION.

UN Hazard Code: **Classed as non-hazardous for transportation.**

The battery pack meets exemption A45 of the IATA hazardous transportation regulations for categories UN3090 (Lithium Batteries), UN3091 (Lithium batteries contained in equipment) and UN3092 (Lithium batteries packed with equipment).

SECTION 15: REGULATORY INFORMATION.

Classification **Hon-hazardous**

Hazard Symbol **Miscellaneous.**

Risk Phrases

R8	contact with combustible material may cause fire.
R11,	highly flammable.
R14/15	reacts violently with water liberating extremely flammable gases.
R17	spontaneously flammable in air.
R19	may form explosive peroxides.
R20	harmful by inhalation.
R22	harmful if swallowed.
R34	causes burns.
R36/37/38	irritating to eyes, respiratory system and skin.
R41	risk of serious damage to the eyes.

Safety Phrases

S1/2	keep locked up and out of the reach of children.
S8,	keep away from moisture.
S16	keep away from sources of ignition - no smoking.
S17	keep away from combustible material.
S24/25	when using do not eat drink or smoke.
S26/27	in case of contact with eyes, rinse immediately with plenty of water.
S29	do not empty into drains.
S33	take precautionary measures against static discharges.
S36,	wear suitable protective clothing.
S37	wear suitable gloves.
S38	in case of insufficient ventilation wear suitable respiratory equipment.
S43	in case of fire, see fire fighting precautions.
S45	in case of incident, seek medical attention.

SECTION 16: OTHER INFORMATION.

The above information is given based on the present state of our knowledge of this product and is, to the best of our knowledge and belief, accurate at the time of publication. No warranty given, either express or implied, with respect to the accuracy, reliability or completeness of the information contained herein and we will assume no liability resulting from its use. The user must satisfy themselves that the information provided is entirely suitable for their particular use.