PRODUCT SAFETY DATA SHEET
PRODUCTS: L7A2/L6-Ex/L6A-Ex/L160/L170

SECTION 1: IDENTIFICATION	
PRODUCT NAME	Marine Safety Light Systems L7A2/L6-Ex/L6A-Ex/L160/L170
MANUFACTURERS NAME	**DANIAMANT LIMITED**
ADDRESS **TELEPHONE NO.** **FAX NO.**	Unit 3, The Admiral Park, Airport Service Road, Portsmouth, Hants. PO3 5RQ UK +44 (0) 23 9267 5100 (Switchboard) +44 (0) 23 9267 5101 (Fax)
EMERGENCY NOS.	**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE EXPOSURE OR ACCIDENT CALL CHEMTREC DAY OR NIGHT:** **00 1 703 527 3887 (SHIPMENT TO AND FROM USA) (CHEMTREC OFFICE)** **800 424 9300 (INTERNAL N.AMERICA MOVEMENTS) (CHEMTREC OFFICE)** **D806 CHEMTREC COMPANY CODE 205617 COMPANY NUMBER**
DESCRIPTION	Lithium powered marine safety light systems are designed to be stored for up to five years before use. The battery cells are hermetically sealed, pressurised primary Manganese dioxide lithium and as supplied are electronically protected by a fuse and from external environment by a moulded 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.

SECTION 2: INFORMATION OF INGREDIENTS			
	HAZARDOUS COMPONENTS:		
	CAS NUMBER	**EC Number**	**Battery Content (%)**
Manganese Dioxide	**1313-13-9**	**215-202-6**	**25 – 47**
Lithium Metal	**7439-93-2**	**231-102-5**	**2 – 5**
1.2 Dimethoxyethane	**110-71-4**	**203-794-9**	**3 – 7**
Propylene Carbonate	**108-32-7**	**203-572-1**	**5 – 17**
Steel	**7439-89-6, 7440-47-3**	**231-096-4, 231-157-5**	**25 – 50**
Polypropylene	**9003-07-0**	**204-062-1**	**3 – 15**
	Reference: Sax's dangerous properties of industrial materials. **NOTE: These products do not contain asbestos.**		

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 flames.
MANGANESE DIOXIDE:	Poison by intravenous and intratracheal routes moderately toxic by subcutaneous route. Experimental reproductive effects. A powerful oxidiser, flammable by chemical reaction. Must not be heated or rubbed in contact with easily oxidizable matter.
1.2 DIMETHOXYETHANE:	Experimental teratogen. Other experimental reproduction effects readily forms an explosive peroxide. A very dangerous fire hazard when exposed to flame, heat or oxidisers. When heated to decomposition it emits acrid smoke and fumes
LITHIUM PERCHLORATE:	Moderately toxic. Skin, eye and mucous membrane irritant an oxidiser which is incompatible with nitromethane acetone hydrogen and oxygen. When heated to decomposition it emits very toxic fumes.

SECTION 4: FIRST AID MEASURES

EYES:	Irrigate thoroughly with water for at least 15 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.
FURTHER TREATMENT:	All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a doctor.
EMERGENCY AND FIRST AID PROCEDURES:	If cell vents, personnel should be evacuated from contaminated areas. Other materials are either inert or have low hazard associated with their exposure.

SECTION 5: FIRE FIGHTING MEASURES

Copious quantities of a water based foam or dry sand are the only recommended extinguishing media for fires involving cells. IF a fire is in an adjacent area, and cells are packed in their original containers, the fire can be fought based on fuelling material e.g. paper and plastic products. Avoid fume inhalation.

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.

EXTINGUISHING MEDIA: Copious quantities of water based foam and dry sand.

SECTION 6: ACCIDENTAL 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.

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 Nickle 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	Light in a plastic housing.
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 REACTIONS	Toxic fumes, and may form peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION	
SIGNS & SYMPTOMS	NONE, unless battery ruptures. In the event of exposure to internal contents, corrosive fumes will be very irritating to skin, eyes and mucous membranes. Over-exposure can cause symptoms of non-fibrotic lung injury and membrane irritation.
INHALATION	Lung irritation.
SKIN CONTACT	Skin irritation.
EYE CONTACT	Eye irritation.
INGESTION	Poisoning if swallowed.
GENERALLY AGGREVATED 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	None 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	Class 9
UN Number	3091
UN Proper Shipping Name	Lithium Metal Batteries Contained in Equipment.
IATA Packing Instructions for air	970, Section II
IMDG Packing instructions for road and sea	P903 Special Provision 188 and 230
Lithium Content	0.6g (Lithium metal cell)
Total Battery Weight	18g (Weight of Individual Cell 18g)
Labelling	As per IATA, IMDG & ADR requirements
Battery Test Criteria	Tested to UN ST/SG/AC.10/11/Rev.5/Amend.1 Criteria III Section 38.3. (Test Certificate available on request). Each cell and battery incorporates a safety venting device. Each cell and battery is equipped with an effective means of preventing external short circuits and reverse current flow.

SECTION 15: REGULATORY INFORMATION

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.
	R21	Harmful in contact with skin
	R22	Harmful if swallowed
	R34	Causes burns.
	R36/37/38	Irritating to 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

Disclaimer	This PSDS is provided for information only. The information and recommendations set forth herein are made in good faith and are believed to be accurate as of the date of preparation. However, the company makes no warranty, either expressed or implied with respect to this information and disclaims all liability from reliance on. It is the shippers responsibility to ensure that they are trained and competent in handling and shipping lithium batteries by all transport modes.

11 November 2025