DANIAMANT

MATERIAL SAFETY DATA SHEET
Products: Rescue Dan R.EXT / Rescue Master 2B / Rescue Master 3B

SECTION 1: IDENTIFICATION.

Product Name	Marine safety light systems.
Manufacturers Name	**Daniamant ApS**
Address	Industrivej 24C, DK-3550 Slangerup, Denmark
Telephone No	+45 47 37 38 00
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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 lithium/sulphur dioxide 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	% optional	OSHA/PEL	ACGIH TLV 5 TEL
Lithium Metal	7439-93-2	<2.5%	N/A	N/A
Sulphur Dioxide	7446-09-5	<33%	5ppm	5 ppm
Acetonitrile	75-05-8	<8%	40ppm	40 ppm
Lithium Bromide		<2%		
Carbon		<6.5%		

Reference : Sax's dangerous properties of industrial materials.

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.

SULPHUR DIOXIDE: This is a colourless gas with a pungent choking odour. The fumes are toxic when in contact with fire. The vapour will cause irritation of the eyes and throat, which can result in bronchitis, asphyxia, and conjunctivitis. See First Aid notes below.

ACETONITRILE: This is a colourless volatile liquid with an ether like odour, which is highly flammable. The toxic fumes should not be inhaled as they can cause fatigue and abdominal pain. In severe cases there may be delirium, convulsions, or paralysis and coma. See First Aid notes below.

ROUTES FOR ENTRY: Sulphur Dioxide.
Inhalation: Yes. **Skin:** Yes. **Ingestion**: Yes.

HEALTH HAZARDS(ACUTE & CHRONIC):

Carcinogenicity:	None
Signs And Symptoms of Exposure:	Sulphur Dioxide - irritation of nose, throat, yes, and/or skin. Suffocating odour.
Medical Conditions:	Generally aggravated by exposure - sulphur dioxide - asthma and other respiratory diseases.
Emergency and first aid procedures:	If cell vents, personnel should be evacuated from contaminated areas. Artificial respiration should be given if breathing stops. Flush any material from skin.

SECTION 4: FIRST AID MEASURES.

In the unlikely event of the battery becoming damaged the user may come into contact with the above components.

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.

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

SECTION 5: FIRE FIGHTING MEASURES.

In the case where significant quantities of lithium / sulphur 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.

Flash Point:	NON FLAMMABLE. (open flame)
Extinguishing Media:	Lith-X (graphite based) or other metal (Class D) powder fire extinguisher. 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.
Special Fire Fighting Procedures:	Use self-contained breathing apparatus.
Unusual Fire And Explosion Hazards:	Battery may vent when subject to excessive heat- exposing contents.

SECTION 6: ACCIDENTIAL RELEASE MEASURES.

Dispose only via approved landfill site or incineration by an approved source. Steps to be taken in case material is released or spilled. Remove personnel from area until fumes dissipate.
Provide maximum ventilation to clear any hazardous gases, waste disposal method. Dispose of cell or battery in accordance with local, state, and Federal environmental regulations.

SECTION 7: HANDLING AND STORAGE.

Handle and store in cool, well-ventilated area. Keep out of direct sunlight and away from heat sources.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION.

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.
STABILITY IN WATER.	Product is waterproof.
REACTION WITH WATER.	Only if damaged.
BOILING POINT.	N/A.
VAPOUR PRESSURE.mm/hg	N/A.
VAPOUR DENSITY.	N/A.
SOLUBILITY IN WATER.	Not soluble in water.
APPEARANCE & ODOUR.	N/A.
SPECIFIC GRAVITY.	(H2O = 1) >1.
MELTING POINT.	190° C Plastic case.
EVAPORATION RATE.	N/A.

SECTION 10: STABILITY AND REACTIVITY.

Hazardous reactions: Flammable when in contact with moisture.
Hazardous decomposition reactions: Toxic fumes.

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.	Tissue damage to throat and gastro / respiratory tract if swallowed.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.	In the event of exposure to internal contents, eczema, skin allergies, lung injuries, asthma and other respiritory disorders may occur

SECTION 12: ECOLOGICAL INFORMATION.

Mammalian effects: None known if used / disposed of correctly.
Eco-toxicity: None known if used / disposed of correctly.
Bioaccumulation potential: None known if used / disposed of correctly.
Environmental fate: None known if used / disposed of correctly.

SECTION 13: DISPOSAL.

Disposal.	DO NOT INCINERATE or subject cells to temperatures in excess of 100℃. Such abuse can result in loss of seal, leakage, and/or cell explosion. Dispose only through a recognised disposer. DO NOT ATTEMPT TO DISMANTLE THIS PRODUCT.

SECTION 14: TRANSPORT INFORMATION.	
UN Hazard Code:	CLASS 9
UN Number	UN3091
UN Name	Lithium Metal Batteries Contained In Equipment.
Packing Group	II
Lithium Content	5g (2 cells)
Watt Hour Rating	41.76wh

SECTION 15: REGULATORY INFORMATION.	
Classification	Class 9.
Hazard Symbol	Miscellaneous.
Risk Phrases	R11, highly flammable. R14/15, reacts violently with water liberating extremely flammable gases. R21, harmful in contact with skin. R22 harmful if swallowed. R36/37, irritating to respiratory system. R35, causes burns. R41, risk of serious damage to the eyes. R42/43, may cause sensitisation by inhalation and skin contact.
Safety Phrases	S2, keep out of the reach of children S8, keep away from moisture S22, do not breathe dust S24, avoid contact with skin S26, in case of contact with eyes, rinse immediately with plenty of water. S36, wear suitable protective clothing S37, wear suitable gloves 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 users must satisfy themselves that the information provided is entirely suitable for their particular use.

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