



PRODUCT SAFETY DATA SHEET PRODUCTS: DAN M4-A / W4-A

SECTION 1: IDENTIFICATION

PRODUCT NAME	Marine Safety Light Systems DAN M4-A / W4-A
MANUFACTURERS NAME	DANIAMANT APS
ADDRESS TELEPHONE NO. FAX NO.	Industrivej 24C, DK-3550 Slangerup, Denmark. +45 47 37 38 00 +45 47 37 38 09
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	Alkaline cell powered marine safety light system. The battery cells are hermetically sealed pressurised primary Alkaline Manganese Dioxide and as supplied are protected 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
Manganese Dioxide	1313-13-9	35-40%	N/A	N/A
Zinc	7440-66-6	10-25%	N/A	N/A
Potassium Hydroxide (35%)	1310-58-3	5-10%	N/A	N/A

Reference : Sax's dangerous properties of industrial materials.

NOTE: This product does not contain asbestos.

SECTION 3: HAZARD IDENTIFICATION

Critical Hazards to man:	If battery leaking, exposure to caustic ingredients may occur.
Critical Hazards to the environment:	Dispose of battery properly (See Section 13). Contains mercury compounds which may present a hazard to aquatic environments.
Other information:	Keep batteries away from small children.

SECTION 4: FIRST AID MEASURES

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

GENERAL ADVICE:	These chemicals and metals are contained in a sealed can. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Contains concentrated (35%) potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 2 to 20 ml, depending on battery size. A similar amount of zinc/zinc oxide may also leak.
INHALATION:	If inhaled respiratory and eye irritation may occur if fumes are released due to heat or an abundance of leaking batteries. Remove to fresh air. Contact physician if irritation persists.
SKIN:	Irritation, including caustic burns/injury, may occur following exposure to a leaking battery. Irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irrigation, injury or pain persists, consult a physician.
INGESTION:	Not anticipated due to size of batteries; choking may occur with the smaller AAA battery. Irritation, including caustic burns/injury may occur following exposure to a leaking battery. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the oesophagus and other tissues.
NOTES TO PHYSICIAN:	The primary acutely toxic ingredient is concentrated (35%) potassium hydroxide. Anticipated potential leakage of potassium hydroxide is 2 to 20 ml, depending on battery size. Other materials are either inert or have low hazard associated with their exposure.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media:	As appropriate for adjacent fire.
Special Fire Fighting Procedures:	In fires involving large quantities of product, use self-contained breathing apparatus and full protective clothing.
Further information:	Hazardous decomposition products may be produced.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapours. Increase ventilation. Clean up personnel should wear appropriate protective gear.
Environmental Precautions:	Not applicable.
Methods for cleaning up:	Not applicable.

SECTION 7: HANDLING AND STORAGE

Handle and store in cool, well-ventilated area. Keep out of direct sunlight and away from heat sources. DO NOT short or install cells incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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. Use neoprene, rubber or nitrile gloves and safety glasses when handling leaking batteries.

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	N/A
MELTING POINT	N/A
EVAPORATION POINT	N/A

SECTION 10: STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION REACTIONS	Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas; caustic vapours of potassium hydroxide and other toxic by-products.
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SECTION 11: TOXICOLOGICAL INFORMATION

NONE, unless battery ruptures, then see Section 2.

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	Dispose in accordance with appropriate regulations. Do not incinerate, since batteries may explode at excessive temperatures.
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SECTION 14: TRANSPORT INFORMATION

UN Hazard Code	None.
UN Number	None.
UN Name	None.
Packing Group	None.
Total Battery Weight	23.2g (Weight of Individual Cell 11.6g)

SECTION 15: REGULATORY INFORMATION

Classification	Not controlled under ADNR (Europe)
Hazard Symbol	None.
Risk Phrases	This product is not classified according to the EU regulations.

SECTION 16: OTHER INFORMATION

	N/A
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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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