

**MATERIAL SAFETY DATA SHEET 1(5)**

Issued by Per Alenfelt	Department T/M	Telephone +46-581-871 00	Date 2003-03-28	Edition number 1	Document number 342130 MSDS Buoyant smoke-1.doc
Product denomination <b>IKAROS 3 MINUTE BUOYANT SMOKE SMOKE SIGNAL</b>					

**1 Identification of the substance and of the company/undertaking**

<b>Product name</b>	Ikaros Buoyant Smoke Signal
<b>Article No.</b>	342130, Datrex Item No. CI3422P
<b>Chemical name</b>	Contains 270 g of pyrotechnic composition.
<b>Document number</b>	342130 MSDS Buoyant smoke-1.doc
<b>Company/Manufacturer</b>	Nammo LIAB AB
<b>Company address</b>	Box 154, 711 23 Lindesberg, Sweden
<b>Telephone number</b>	+46-581 87100
<b>Telefax number</b>	+46-581 87200
<b>Emergency telephone number</b>	+46-19 323425
<b>Contact person</b>	Marketing Department

**Dangerous Goods, documentation**
**2 Composition/Information on ingredients**

Identification on product	Substances	CAS-number	%	Risk phrases
Ignition composition:	Potassium chlorate	3811-04-09	30-40	<i>O, Xn</i> ; R9-20/22
	Lactose	10039-26-6	30-40	-
	Pumice	-	10-20	-
	Wax	-	5-10	-
Smoke composition:	Potassium chlorate	3811-04-09	30-40	<i>O, Xn</i> ; R9-20/22
	Lactose	10039-26-6	10-20	-
	Smoke dye (anthraquinone dyestuff)	-	30-50	-
	Wax	-	10-20	-

**3 Hazard Identification**

Type of hazard	Dangerous properties
Physical/Chemical	Pyrotechnic device.
Inhalation	Smoke can be irritating.
Skin contact	Contact with hot gasses or hot casing can cause burns.
Eye contact	Contact with smoke and/or ashes can be irritating
Fire and explosion hazards	If exposed to flame the product will eventually ignite.
Environmental hazards	NA

**4 First-aid measures**

<b>After inhalation</b>	Move patient to fresh air.
<b>After skin contact</b>	If burned, wash with plenty of water for at least 20 min.
<b>After eye contact</b>	Keep eyelid apart. Wash with a lot of water. If needed visit physician.

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**After ingestion** Contact a physician.

## 5 Fire-fighting measures

**Suitable extinguishing media** Use any fire extinguishing media at early stages of fire. Once the product has ignited it can not be extinguished.

**Extinguishing media not to be used** No restriction

**Special exposure hazard arising** The products emit thick orange smoke that can be ignited in a confined space.

**Special protective equipment** Breathing aid.

## 6 Accidental release measures

**Personal precautions** Normal industrial hygiene, use protective gloves.

**Environmental precautions** NA

**Methods for cleaning up** Water, destruction shall be carried out by experts.

## 7 Handling and storage

**Handling** NA

**Storage** Temperature should not exceed +75 °C

## 8 Personal protection/Exposure controls

**Engineering measures** No fire, sparks or welding close to the items. If cleaning up, use tools which can not cause sparks.

**Personal protective equipment** Use protective gloves and eye-preserving glasses

**Respiratory protection** Use breath protective in case of dust

**Hand protection** Use protective gloves

**Eye protection** Use protective glasses

**Skin protection** NA

**Specific hygiene measures** Normal industrial hygiene

**Further information** NA

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## 9 Physical and chemical properties

<b>Appearance</b>	The product consists of a tin can with plastic lid
<b>Colour</b>	Yellow can with red lid and orange sticker
<b>Odour</b>	NA
<b>Decomposition point ( C)</b>	NA
<b>Melting point/range ( C)</b>	NA
<b>Flash point ( C)</b>	NA
<b>Autoignition temperature ( C)</b>	> 250 C
<b>Explosion properties</b>	Pyrotechnic smoke generator.
<b>Boil point/range ( C)</b>	NA
<b>Relative density (kg/m<sup>3</sup>)</b>	NA
<b>Solubility in water</b>	NA
<b>Solubility in other solvents</b>	NA
<b>Other data</b>	NA

## 10 Stability and reactivity

<b>Conditions to avoid</b>	High temperatures, over +100 C.
<b>Materials to avoid</b>	NA
<b>Hazardous decomposition products</b>	NA
<b>Other information</b>	NA

## 11 Toxicological information

<b>LD<sub>50</sub> oral rat</b>	NA
<b>Hazardous ingredients</b>	NA
<b>Immediate health effects</b>	NA
<b>Delayed health effects</b>	NA
<b>Acute toxicity</b>	NA
<b>Chronic toxicity (long-term)</b>	NA
<b>Carcinogenicity</b>	NA
<b>Mutagenicity</b>	NA
<b>Reproductive toxicity</b>	NA
<b>Inhalation</b>	NA
<b>Skin</b>	NA
<b>Eye</b>	NA

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**Ingestion** NA

## 12 Ecological information

**Microtox (mg/l, LC<sub>50</sub>)/(mg/l, EC<sub>50</sub>)** NA

**Mobility** NA

**Persistence degradability** NA

**Bioaccumulative potential** NA

**Aquatic toxicity and other data** NA

**Marine pollutant (IMDG Code)** NA

## 13 Disposal considerations

**Disposal of waste materials** Waste should be kept in separate container, destruction by experts  
 Used product may be disposed as ordinary plastic/metallic waste.  
**DO NOT TRY TO DISMANTLE THE PRODUCT!**

**Contaminated packing** May burn rapidly

## 14 Transport information

### Hazard label

ADR/RID 1.4G

IMDG (DGD) 1.4G

Shippers Declaration (DGR) 1.4G

Proper shipping name Signals, Smoke

### ADR/ADR-S, RID/RID-S

UN number 0197

Packing group

### IMO-IMDG code

EMS number

### ICAO-TI, IATA-DGR

Packing group

EINECS number NA

CAS number NA

EX-number (DOT/USA) EX-9904090

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**15 Regulatory information**

<b>Health hazard product</b>	Yes
<b>Environmentally hazardous product</b>	NA
<b>EC directive (67/548/EEC)</b>	NA
<b>Symbols</b>	E, Explosive
<b>Risk phrases</b>	R2; Risk of explosion by shock, friction, fire or other sources of ignition R22; Harmful if swallowed
<b>Safety phrases</b>	S15; Keep away from heat. S16; Keep away from sources of ignition -No smoking. S17; Keep away from combustible material S35; This material and its container must be disposed of in a safe way. S43; In case of fire, use water S45; In case of accident or if you feel unwell, seek medical advise immediately. S46; If swallowed, seek medical advice immediately and show this container or label

**16 Other information**

The current Safety Data Sheet was defined by Nammo LIAB AB on the basis of knowledge of the product at the date of the issue.

Therefore, data provided in this form can not be considered as exhaustive.

It is the duty of the operator

to develop under his own responsibility, the safety dispositions regarding the operation of the product taking into account the data from this form

to pass to all users and operators the appropriate safety data and warning regarding the risks mentioned in the documentation relative to the utilisation of the product

to be cautious of possible risks faced when the product is used for other utilisation than those for which it has been designed