

SAFETY DATA SHEET



IKAROS MOB Light & Smoke Signal MKIV



IKAROS **IKAROS**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Date issued 22.11.2016

Revision date 23.11.2020

1.1. Product identifier

Product name IKAROS MOB Light & Smoke Signal MKIV

Article no. 345105

Product definition 50 g ignition composition, 1300 g orange smoke composition and lithium battery
Net Explosive Weight: 1350 g ± 5%.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / mixture Man over board signal.

1.3. Details of the supplier of the safety data sheet

Company name Hansson PyroTech AB

Postal address Köpingsvägen 35

Postcode 711 31

City Lindesberg

Country Sweden

Telephone number +46 58187250

Email info@hansson-pyrotech.com

Website www.hansson-pyrotech.com

1.4. Emergency telephone number

Emergency telephone Telephone number: +46 581 87 147 (Available 24 hours)

Description: Emergency call

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No 1272/2008
[CLP / GHS]

Expl. 1.4; H204
Skin Irrit. 2; H315
Skin Sens. 1; H317
Eye Irrit. 2; H319
STOT SE 3; H335
Aquatic Chronic 2; H411

Substance / mixture hazardous
properties

Main health hazard: Pyrotechnic product. Inhalation: Respiratory irritant. Contact with skin: Irritating to the skin. May cause an allergic skin reaction. Contact with burning product can cause severe burns. Contact with eyes: Causes serious eye irritation. Ingestion: May cause nausea and vomiting. Fire and explosion hazard: Risk of explosion if the product is exposed to electric shock, friction, fire or other sources of ignition. Environmental hazard: Toxic to aquatic life with long-lasting effects.

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label

Solvent Orange 86, Potassium chlorate

Signal word

Warning

Hazard statements

H204 Fire or projection hazard.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P240 Ground and bond container and receiving equipment. P250 Do not subject to grinding / shock / friction / . P280 Wear protective gloves / protective clothing / eye protection / face protection. P370 + P372 + P380 + P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives. P370+P380+P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. P401 Store in accordance with national regulation. P501 Dispose of contents / container to authorised waste disposal facility.

Other EU labelling requirements

In accordance with Article 23 and marginal 1.3.5 of the CLP, the specific provisions on labelling laid down in section 1.3 of Annex I shall apply in respect of the followings:
(e) explosives, as referred to in section 2.1 of Annex I, placed on the market with a view to obtaining an explosive or pyrotechnic effect.

1.3.5 Explosives placed on the market with a view to obtaining an explosive or pyrotechnic effect.

Explosives, as referred to in section 2.1, placed on the market with a view to obtaining an explosive or pyrotechnic effect shall be labelled and packaged in

accordance with the requirements for explosives only.

2.3. Other hazards

Health effect Contact with burning product can cause severe burns.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

| Substance | Identification | Classification | Contents | Notes |
|--------------------|-------------------------------------|---------------------------------------|----------|-------|
| Solvent Orange 86 | CAS No.: 81-64-1 | Skin Sens. 1; H317 | = 37,6 % | |
| | EC No.: 201-368-7 | Eye Irrit. 2; H319 | | |
| | REACH Reg. No.: 01-2119971261-41 | Skin Irrit. 2; H315 STOT SE3; H335 | | |
| | | | | |
| Potassium chlorate | CAS No.: 3811-04-9 | Ox. Sol. 1; H271 | = 26,5 % | |
| | EC No.: 223-289-7 | Acute tox. 4; H332 | | |
| | Index No.: 017-004-00-3 | Acute tox. 4; H302 | | |
| | REACH Reg. No.: 01-2119494917-18 | Aquatic Chronic 2; H411 | | |

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|--------------|--|
| General | Contaminated work clothing should be washed before using again. Special treatment is urgent (see label on this label). |
| Inhalation | Move the person to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist. |
| Skin contact | If burned, rinse with plenty of water for at least 20 minutes. In case of any other contact with skin, wash with soap and water for several minutes. |
| Eye contact | Hold eyelids open and rinse with soft, lukewarm water or eye wash liquid for at least five minutes. Remove contact lenses. Consult a doctor if symptoms persist. |
| Ingestion | Get medical advice/attention. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|----------------------------|---|
| Acute symptoms and effects | Contact with burning product can cause severe burns. May cause nausea and vomiting. Causes serious eye irritation. Irritating to the skin. May cause an allergic skin reaction. Irritating to the respiratory system. |
|----------------------------|---|

4.3. Indication of any immediate medical attention and special treatment needed

| | |
|-------------------|---------------------------------------|
| Medical treatment | None other than the one listed above. |
|-------------------|---------------------------------------|

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|------------------------------|--|
| Suitable extinguishing media | Use foam, dry chemical, CO2 or mist early in the fire. Once the product is lit up, it is very difficult to extinguish. |
|------------------------------|--|

Improper extinguishing media No restrictions.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards The product is an explosion hazard, as it generates large quantities of gas and heat, once lit.

5.3. Advice for firefighters

Personal protective equipment Wear full protective clothing for chemical fires, including breathing apparatus. If possible, remove undamaged containers from the danger area. Remove all ignition sources.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures Ensure good ventilation. Use appropriate protective equipment, see section 8. Avoid skin and eye contact. Remove all ignition sources.

6.2. Environmental precautions

Environmental precautionary measures Prevent discharge into sewers or the local environment/streams. Contact emergency services upon greater emissions.

6.3. Methods and material for containment and cleaning up

Containment Collect with tools that do not give rise to ignition.

Clean up The waste is placed in closed containers and disposed of as hazardous waste in accordance with section 13.

6.4. Reference to other sections

Other instructions See sections 8 and 13 for information about protection and waste management.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling Avoid sparks, shock and friction. Use personal protective equipment, see section 8. Avoid skin and eye contact. Protect the product from sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Storage Store cool and dry in a well-ventilated place. Keep away from sources of ignition - no smoking. Keep out of reach of children.

7.3. Specific end use(s)

Specific use(s) Man over board signal.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Control parameters comments PNEC/DNEL are not available.

8.2. Exposure controls

Precautionary measures to prevent exposure

Appropriate engineering controls Keep away from fire, sparks and other ignition sources. When cleaning, use equipment that does not cause sparks.

Eye / face protection

Suitable eye protection Shatterproof goggles or visors.

Hand protection

Suitable gloves type Leather gloves or the like.

Skin protection

Skin protection remark Change work clothing daily if contamination is reasonably probable.

Respiratory protection

Recommended type of equipment Particle filter EN143 Type P or EN149 type FFP-S.

Hygiene / environmental

Personal protection equipment, comments Contact your protective equipment supplier for more information.

Specific hygiene measures No smoking.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-------------------------------|---|
| Physical state | Yellow aluminium tube inserted in a yellow floating body made of plastic with an orange ribbon and two chimneys. Orange label. Black igniter. |
| Colour | See under "Physical state". |
| Odour | None. |
| pH | Status: In delivery state Comments: No information available. Status: In aqueous solution Comments: No information available. |
| Melting point / melting range | Comments: No information available. |
| Boiling point / boiling range | Comments: No information available. |
| Flash point | Comments: No information available. |
| Evaporation rate | Comments: No information available. |
| Flammability | The contents are flammable. |

| | |
|---------------------------|---|
| Explosion limit | Comments: No information available. |
| Vapour pressure | Comments: No information available. |
| Vapour density | Comments: No information available. |
| Relative density | Comments: No information available. |
| Solubility | Comments: Insoluble in water. |
| Auto-ignition temperature | Value: > 200 °C Method: Ignition temperature |
| Viscosity | Comments: No information available. |
| Explosive properties | The product is explosive. Emits smoke. Also contains a lithium battery. |
| Oxidising properties | Content is oxidizing. |

9.2. Other information

9.2.2. Other safety characteristics

| | |
|----------|--|
| Comments | These are typical values and do not constitute an exact product specification. |
|----------|--|

SECTION 10: Stability and reactivity

10.1. Reactivity

| | |
|------------|---|
| Reactivity | Stable product under recommended storage and handling conditions. |
|------------|---|

10.2. Chemical stability

| | |
|-----------|---|
| Stability | Stable product under recommended storage and handling conditions. |
|-----------|---|

10.3. Possibility of hazardous reactions

| | |
|------------------------------------|--|
| Possibility of hazardous reactions | Stable product under recommended storage and handling conditions. Risk of explosion in contact with sulfuric acid. |
|------------------------------------|--|

10.4. Conditions to avoid

| | |
|---------------------|---------------------------------|
| Conditions to avoid | Avoids temperatures above 75°C. |
|---------------------|---------------------------------|

10.5. Incompatible materials

| | |
|--------------------|----------------|
| Materials to avoid | Sulfuric acid. |
|--------------------|----------------|

10.6. Hazardous decomposition products

| | |
|----------------------------------|---|
| Hazardous decomposition products | Pyrotechnic products, emit large amounts of smoke and gets hot (about 200 ° C). |
|----------------------------------|---|

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------|-------------------|
| Substance | Solvent Orange 86 |
|-----------|-------------------|

| | |
|--------------------------|---|
| Acute toxicity | <p>Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 5000 mg/kg Animal test species: Rat Comments: Non-acute toxic.</p> |
| Substance | Potassium chlorate |
| Acute toxicity | <p>Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: = 1870 kg/mg Animal test species: Rat Comments: Acute toxic when ingested.</p> <p>Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit Comments: Non-acute toxic.</p> |
| Other toxicological data | No data available for the product itself. The data below is based on individual ingredients of the product. |

Other information regarding health hazards

| | |
|---|---|
| General respiratory or skin sensitisation | Irritating to the respiratory system. |
| Inhalation | Powder may be irritating to the respiratory system. |
| Skin contact | Irritating to the skin. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | May cause nausea and vomiting. |
| Sensitisation | May cause an allergic skin reaction. |
| Germ cell mutagenicity, human experience | No known mutagenicity. |
| Carcinogenicity, other information | No known carcinogenicity. |
| Reproductive toxicity | No known reproductive toxicity. |

Symptoms of exposure

| | |
|-------------------------|--|
| In case of ingestion | May cause irritation of the gastrointestinal tract with nausea and vomiting as a result. |
| In case of skin contact | Irritating to skin. May cause an allergic skin reaction. |
| In case of inhalation | Irritation of nose and throat. |
| In case of eye contact | Irritating to eyes. |

11.2 Other information

SECTION 12: Ecological information

12.1. Toxicity

| | |
|------------------------|--|
| Substance | Potassium chlorate |
| Aquatic toxicity, fish | Value: = 1,75 mg/l Test duration: 96h Species: Oncorhynchus mykiss Method: LC50 Comments: Toxic to aquatic organisms. |
| Ecotoxicity | Producted has not been tested. The data below is based on individual ingredients of the product. The product is toxic to aquatic life with long-lasting effects. |

12.2. Persistence and degradability

| | |
|--|--|
| Persistence and degradability description/evaluation | Not applicable. Contains inorganic materials and is in solid form. |
|--|--|

12.3. Bioaccumulative potential

| | |
|-------------------------------|---|
| Substance | Solvent Orange 86 |
| Bioconcentration factor (BCF) | Value: = 30,9 Comments: No bioaccumulation expected. |
| Bioaccumulation, comments | No bioaccumulation expected. |

12.4. Mobility in soil

| | |
|----------|--|
| Mobility | None – product in form of solid article. |
|----------|--|

12.5. Results of PBT and vPvB assessment

| | |
|------------------------------------|---|
| Results of PBT and vPvB assessment | This product does not contain any PBT or vPvB substances. |
|------------------------------------|---|

12.6. Endocrine disrupting properties

12.7. Other adverse effects

| | |
|-----------------------------------|--|
| Additional ecological information | Toxic to aquatic life with long lasting effects. |
|-----------------------------------|--|

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|---|
| Appropriate methods of disposal for the chemical | Waste should be kept in separate container. NO SMOKING! Unused product is hazardous waste and must be disposed of in accordance with national and local regulations. Contact approved waste disposal service to dispose of this material. |
| Appropriate methods of disposal for the contaminated packaging | Used product treated as ordinary plastic / metallic waste. DO NOT TRY TO DISASSEMBLE UNUSED PRODUCT! Contaminated packaging may pose a fire hazard. |
| EWC waste code | EWC waste code: 160402 fireworks wastes Classified as hazardous waste: Yes |

| | |
|-------------------|--|
| Other information | Contaminated packing may burn rapidly. |
|-------------------|--|

SECTION 14: Transport information

| | |
|-----------------|-----|
| Dangerous goods | Yes |
|-----------------|-----|

14.1. UN number

| | |
|-------------|------|
| ADR/RID/ADN | 0507 |
|-------------|------|

| | |
|------|------|
| IMDG | 0507 |
|------|------|

| | |
|-----------|------|
| ICAO/IATA | 0507 |
|-----------|------|

| | |
|----------|--|
| Comments | Packaging in cardboard : 1.4S UN-number: UN 0507 SIGNALS, SMOKE Packaging instructions: P135 Packaging in cardboard : 1.4G UN-number: UN 0197 SIGNALS, SMOKE Packaging instructions: P135 Swedish Civil Contingencies Agency (MSB) Cert No: 2018-06533 |
|----------|--|

14.2. UN proper shipping name

| | |
|------------------------------|----------------|
| Proper shipping name English | SIGNALS, SMOKE |
|------------------------------|----------------|

| | |
|-------------|--|
| ADR/RID/ADN | |
|-------------|--|

| | |
|-------------|----------------|
| ADR/RID/ADN | SIGNALS, SMOKE |
|-------------|----------------|

| | |
|------|----------------|
| IMDG | SIGNALS, SMOKE |
|------|----------------|

| | |
|-----------|----------------|
| ICAO/IATA | SIGNALS, SMOKE |
|-----------|----------------|

14.3. Transport hazard class(es)

| | |
|-------------|------|
| ADR/RID/ADN | 1.4S |
|-------------|------|

| | |
|---------------------------------|------|
| Classification code ADR/RID/ADN | 1.4S |
|---------------------------------|------|

| | |
|------|------|
| IMDG | 1.4S |
|------|------|

| | |
|-----------|------|
| ICAO/IATA | 1.4S |
|-----------|------|

14.4. Packing group

14.5. Environmental hazards

| | |
|-----------------------|-----|
| IMDG Marine pollutant | Yes |
|-----------------------|-----|

14.6. Special precautions for user

| | |
|-------------------------------------|----------------------------------|
| Special safety precautions for user | See P-statements in Section 2.2. |
|-------------------------------------|----------------------------------|

14.7. Maritime transport in bulk according to IMO instruments

| | |
|--------------|----------------|
| Product name | SIGNALS, SMOKE |
|--------------|----------------|

Additional information

| | |
|--------------------------|------|
| Hazard label ADR/RID/ADN | 1.4S |
| Hazard label IMDG | 1.4S |
| Hazard label ICAO/IATA | 1.4S |

ADR/RID Other information

| | |
|-------------------------|---|
| Tunnel restriction code | E |
| Transport category | 4 |

IMDG Other information

| | |
|-----|----------|
| EmS | F-B, S-X |
|-----|----------|

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

| | |
|-----------------------------|--|
| Legislation and regulations | Safety data sheet and classification in accordance with regulation 1272/2008 /EC (CLP) and regulation 830/2015/EC. |
|-----------------------------|--|

15.2. Chemical safety assessment

| | |
|--------------------------------------|-----|
| Chemical safety assessment performed | Yes |
|--------------------------------------|-----|

SECTION 16: Other information

| | |
|--|--|
| List of relevant H-phrases (Section 2 and 3) | H204 Fire or projection hazard. H271 May cause fire or explosion; strong oxidiser. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H411 Toxic to aquatic life with long lasting effects. |
| CLP classification, comments | Classification and labelling are based on CLP (Regulation 1272/2008/EC and Regulation 830/2015/EC) |
| Last update date | 23.11.2020 |
| Version | 9 |