IKAROS

SAFETY DATA SHEET

Ikaros Parachute Rocket, Red



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 23.11.2016

Revision date 23.11.2020

1.1. Product identifier

Product name Ikaros Parachute Rocket, Red

Article no. Order Number: 340100

Product definition 6,5 g ignition composition, 50 g composite propellant and 95 g red illuminating

composition Explosive weight: 152 g ± 5%.

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

Use of the substance / preparation Pyrotechnic distress rocket.

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 58187139

Email <u>info@hansson-pyrotech.com</u>

Website www.hansson-pyrotech.com

1.4. Emergency telephone number

Emergency telephone Telephone number: +46 581 87 111 (Available 24 hours) +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. 1.3; H203

Acute Tox. 4; H302

Eye Dam. 1; H318

Substance / mixture hazardous properties

Main health hazard: Pyrotechnic product. Inhalation: May be mildly irritating to the respiratory system. Contact with skin: May be mildly irritating to the skin. Contact with burning product can cause severe burns. Contact with eyes: Causes serious eye damage. Ingestion: Harmful if swallowed. Fire and explosion hazard: Risk of explosion if the product is exposed to electric shock, friction, fire or other sources of ignition. Environmental hazard: Not classified as dangerous to the environment.

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label

Potassium perchlorate = 24,09 %, Strontium nitrate

Signal word

Danger

Hazard statements

H203 Explosive; fire, blast 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. 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 Potassium nitrate	Identification CAS No.: 7757-79-1 EC No.: 231-818-8 REACH Reg. No.: 01-2119488224-35	Classification Ox. Sol. 3; H272 Aquatic Acute 1; H400	Contents = 3,17 %	Notes
Potassium perchlorate	CAS No.: 7778-74-7 EC No.: 231-912-9 Index No.: 017-008-00-5 REACH Reg. No.: 01-2120021000-89	Ox. Sol. 1; H271 Acute tox. 4; H302	= 24,09 %	
Strontium nitrate	CAS No.: 10042-76-9 EC No.: 233-131-9 REACH Reg. No.: 01-2120007501-75	Ox. Sol. 1; H271 Eye Dam. 1; H318	= 31,25 %	
Sulphur	CAS No.: 7704-34-9 EC No.: 231-722-6 Index No.: 016-094-00-1 REACH Reg. No.: 01-2119487295-27	Skin Irrit. 2; H315	= 0,46 %	

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 lukewarm water for at least ten minutes. Remove contact lenses. Get medical attention immediately!	
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. Harmful if swallowed. Causes serious eye damage. May be mildly

irritating to the skin and 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

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) Distress rocket.

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

Shatter-proof glasses or goggles.

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 Dark red plastic pipes with red plastic lid and orange label.

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: > 250 °C

Method: Ignition temperature

Viscosity Comments: No information available.

Explosive properties The product is explosive.

Oxidising properties Content is oxidizing.

9.2. Other information

Other physical and chemical properties

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.

10.4. Conditions to avoid

Conditions to avoid Avoids temperatures above 75°C.

10.5. Incompatible materials

Materials to avoid Not applicable.

10.6. Hazardous decomposition products

Hazardous decomposition

The product is explosive, generating large quantities of gas and heat once ignited.

products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance Potassium nitrate

Acute toxicity Type of toxicity: Acute

Effect tested: LD50
Route of exposure: Oral
Value: = 3750 mg/kg
Animal test species: Rat

Substance Strontium nitrate

Acute toxicity Effect tested: LD50

Route of exposure: Oral Value: = 2750 mg/kg bw Animal test species: Rat Comments: Non-acute toxic

Substance Sulphur

Acute toxicity Type of toxicity: Acute

Effect tested: LD50
Route of exposure: Oral
Value: > 3000 mg/kg
Animal test species: Rat

Comments: Not hazardous if swallowed.

Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal

Value: > 2000 mg/kg

Animal test species: Rabbit

Comments: Not hazardous in case of skin contact.

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

No known sensitizing effect.

Inhalation May be mildly irritating to the respiratory system.

Skin contact May be mildly irritating to the skin.

Eye contact Causes serious eye damage.

Ingestion May cause nausea and vomiting.

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 inhalation May be irritating to the respiratory system.

In case of eye contact

Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Substance Potassium perchlorate

Aquatic toxicity, fish Value: = 2511 mg/l

Test duration: 96h Method: LC50

Comments: Not hazardous to aquatic organisms.

Substance Sulphur

Aquatic toxicity, fish **Value:** = 866 mg/l

Test duration: 96h

Species: Brachydanio rerio

Method: LC50

Comments: Not hazardous to aquatic organisms.

Substance Potassium nitrate

Aquatic toxicity, algae **Value:** = 0,14 mg/l

Test duration: 72h Method: IC50

Comments: Very toxic to aquatic organisms.

Substance Sulphur

Aquatic toxicity, crustacean Value: > 5000 mg/l

Test duration: 48h Species: D.magna Method: EC50

Comments: Not hazardous to aquatic organisms.

Ecotoxicity Producted has not been tested. The data below is based on individual ingredients

of the product.

12.2. Persistence and degradability

Persistence and degradability description/evaluation

Not applicable – contains inorganic materials and is in form of solid article.

12.3. Bioaccumulative potential

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

This product does not contain any PBT or vPvB substances.

assessment

12.6. Other adverse effects

Additional ecological information

Not classified as toxic to water (the IMDG-code).

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

14.1. UN number

ADR/RID/ADN

0195

IMDG

0195

ICAO/IATA

0195

Comments

Article Number: 340100

UN-number: 0195 SIGNALS, DISTRESS Packaging in cardboard: 1.3G (not USA)

Packaging instructions: P135

14.2. UN proper shipping name

Proper shipping name English

ADR/RID/ADN

SIGNALS, DISTRESS

ADR/RID/ADN

SIGNALS, DISTRESS

SIGNALS, DISTRESS

IMDG

ICAO/IATA

SIGNALS, DISTRESS

14.3. Transport hazard class(es)

ADR/RID/ADN

1.3G

Classificaton code ADR/RID/ADN

1.3G

IMDG

1.3G

ICAO/IATA

1.3G

14.4. Packing group

14.5. Environmental hazards

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, DISTRESS

Additional information

Hazard label ADR/RID/ADN 1.3G

Hazard label IMDG 1.3G

Hazard label ICAO/IATA 1.3G

ADR/RID Other information

Tunnel restriction code C5000D

Transport category

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

Yes

performed

Chemical safety assessment Chemical safety investigation (CSI) is established for the product.

SECTION 16: Other information

List of relevant H-phrases (Section

2 and 3)

H203 Explosive; fire, blast or projection hazard.

 $\ensuremath{\mathsf{H271}}$ May cause fire or explosion; strong oxidiser.

H272 May intensify fire; oxidiser. H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage. H400 Very toxic to aquatic life.

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 5