

Pyrotechnourgiki Ltd

Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: **SDS Floating Smoke Signal, Orange Edition 1.1**

1. IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Product Name: Floating smoke signal, Orange

Article Nos:

Chemical name: 77 g of potassium chlorate and 120 g of 1,4 dihydroxy-anthraquinone.

Document code: sds smoke signal orange, ed. 1

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

Use: distress signal

Uses advised against: non specified

1.3. Details of the supplier of the Safety Data Sheet

Company / manufacturer: Pyrotechnourgiki Ltd – Pyrotechnourgiki Ltd
Marine Signals – Fireworks.

Company address: Elaionas Thivon, PC 32200, Thiva, Greece

E-mail / internet: kazakop@otenet.gr www.pyrotech.gr

Telephone number: (+30) 2262071796

Telefax number: (+30) 2262071795

1.4. Emergency telephone number:

Emergency telephone number: (+30) 2262071796

Contact person: Ask for a company representative

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Main health hazard: hazards refer to contents of smoke canister

Inhalation: Irritating to respiratory system

Skin contact: Irritating to skin. May cause sensitization by skin contact.

Contact with exhaust gases can cause burns

Eye contact: Irritating to eyes

Ingestion: May give rise to upset stomach, sickness, vomiting

Fire and explosion hazards: Risk of explosion by shock, fire, friction, or other sources of ignition

Environmental hazards: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment

Pyrotechnourgiki Ltd
Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

CLP Classification	DPD Classification
Explosive division 1.4 H204 Skin irritant Category 2- H315 Skin sensitizer Category 1-H317 Eye Irritant Category 2 - H-319 STOT SE Category 3 - H335 Aqueous chronic category 2 – H411	Explosive - R2 Harmful - R20/22 – R36/37/38 – R43 Hazardous for the environment – R51/53
For full wording of hazard statements see section 16	For full wording of hazard statements see section 16

2.2. Label elements



WARNING: Contains Potassium chlorate and 1,4 dihydroxy-anthraquinone

H204: Fire or projection hazard

H332: Harmful if inhaled

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation

H335: may cause respiratory irritation

H411: Toxic to aquatic life with long lasting effects

P102: Keep out of reach of children

P210: Keep out of heat/ sparks/ open flames/ hot surfaces. No smoking

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection

P501: Dispose of contents / container to authorized waste disposal facility

P370 + P378: In case of fire: Use water extinction

P309 + P311: If exposed or you feel unwell: call a POISON CENTER or a doctor/ physician

P301 +310: If swallowed: Immediately call a POISON CENTER or doctor/ physician

2.3. Other hazards

Contact with exhaust gases may cause burns

3. COMPOSITION / INFORMATION OF INGREDIENTS

Hazardous component(s)

Under CLP EC 1272/2008

Pyrotechnourgiki Ltd

Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: **SDS Floating Smoke Signal, Orange Edition 1.1**

Substance	CAS No	REACH registration No	%	Mas s (g)	CLP Hazard Category and H statements
1,4-dihydroxy anthraquinone	81-64-1	Not yet available	42	120	Skin sensitizer cat 1 – H317 Eye irritant cat 2 – H319 Skin irritant cat 2 – H315 STOT SE Cat 3 – H335
Potassium chlorate	3811-04-9	Not yet available	27	77	Oxidizing solid cat 1 – H271 Acute toxic, cat. 4 - H302, H332 Aquatic chronic, cat. 2 – H411

Under DPD EC1999/45

Substance	CAS No	EC No	%	Mas s (g)	Symbol and risk phrases
1,4-dihydroxy anthraquinone	81-64-1	201-368-7	42	120	Xi: R36/ 37/ 38 - 43
Potassium chlorate	3811-04-9	223-289-7	27	77	O, Xn, N: R9-20/22 – 51/53

4. FIRST –AID MEASURES

4.1. Description of first-aid measures

After inhalation: Move patient to fresh air. If needed, visit physician

After skin contact: If burnt, wash with water, for at least 20 minutes

After eye contact: Keep eyelids apart. Wash with plenty of water. If needed, visit a physician.

After ingestion: Contact a physician

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

Contact with exhaust gases can cause burns. Harmful if inhaled

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

None other than above

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Pyrotechnourgiki Ltd
Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

- *Suitable extinguishing media:* Use any extinguishing media at early stages of fire. Once the product has ignited, it cannot be extinguished
- *Not to be used:* No restriction

5.2. Special hazards arising from the substance or mixture

Product is explosive, evolving large quantities of gases and orange colored smoke if involved in fire

5.3. Advice for fire fighters: Normal equipment

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Normal industrial hygiene. Use protective gloves

6.2. Environmental Precautions

Do not let waste reach drains, sewers and bodies of water, or leak into ground

6.3. Methods and material for containment and cleaning up

Collect using non sparking tools, reuse if undamaged. Otherwise, keep for disposal by experts.

6.4. Reference to other solutions

See sections 8 and 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid dropping the signal on hard surfaces

7.2. Conditions for safe storage, including any incompatibilities

Storage: Temperature should not exceed 75 ° C.

7.3. Specific end use(s) Distress signal

8. PERSONAL PROTECTION / EXPOSURE CONTROLS

8.1. Control parameters:

Non set

8.2. Exposure controls

Recommended engineering controls: No fire, sparks or welding close to the items. If cleaning up spillage, use tools which cannot strike sparks

Personal protective equipment: Normally not needed. But in case of spillage,

- Respiratory protection: In case of dust, use particle filter mask, as EN 143, type P, or EN 149, type FFP-S
- Eye protection: Shutter proof glasses or goggles
- Skin protection; Normal industrial hygiene.
- *Specific hygiene measures:* No smoking
- *Further information:* Always check applicability with your supplier of protective equipment.

Pyrotechnourgiki Ltd

Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: **SDS Floating Smoke Signal, Orange Edition 1.1**

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: Yellow metal can with orange label and red plastic lid.

Odor: None

Odor threshold value: Not applicable

pH (concentrated product): Not applicable

Melting point (° C): not determined

Boiling point/ range (° C): not applicable

Flash point (° C): not applicable

Evaporation rate: not applicable

Flammability: Contents are flammable

Explosive properties: Intrinsically explosive. Emits orange smoke.

Vapor pressure (mbar at 25 ° C): not applicable

Vapor density: not applicable

Density at 20 ° C (g/cm³): not determined

Solubility in water (% by weight): Insoluble

Solubility in solvents: not determined

Partition coefficient (log Pow): Not applicable

Autoignition temperature (° C): > 190

Decomposition temperature (° C): not determined

Viscosity: Not applicable

Oxidizing properties: Contents have oxidizing properties.

9.2. Other information

Note: These are typical values and do not constitute a specification.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable product under recommended handling and storage conditions.

10.2. Chemical stability

Stable product under recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Stable product under recommended handling and storage conditions.

10.4. Conditions to avoid

High temperatures, above 75° C

10.5. Incompatible materials

Not applicable

10.6. Hazardous decomposition products

Product is explosive, evolving large quantities of gases and orange colored smoke if involved in fire.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Pyrotechnourgiki Ltd
Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

No data available on mixture. Data based on individual components shown below.

Hazardous ingredients: potassium chlorate and 1,4 dihydroxy Anthraquinone

(a) Acute toxicity: potassium chlorate: LD₅₀ oral rat: 1870 mg / Kg harmful by ingestion

Calculated product ATE ingestion = 4452 mg / Kg, not classified as hazardous by ingestion

Calculated product ATE inhalation = 4,36mg / Lt dust, not classified as hazardous by inhalation

(b) Skin corrosion / irritation: 1,4 dihydroxy-anthraquinone: Skin irritant category 2, under CLP

(c) Serious eye damage / irritation : 1,4 dihydroxy-anthraquinone: eye irritant category 2, under CLP

(d) Respiratory or skin sensitization: 1,4 dihydroxy-anthraquinone: Skin sensitizer category1, under CLP

(e) Germ cell mutagenicity: No deleterious effects known

(f) Carcinogenicity: No deleterious effects known

(g) Reproductive toxicity: No deleterious effects known

(h) STOT – single exposure: 1,4 dihydroxy-anthraquinone: STOT SE category 3 under CPL

(i) STOT – Repeated exposure: No deleterious effects known

(j) Aspiration hazard: No deleterious effects known

Likely routes of exposure: Contact with skin

Symptoms related to the physical, chemical and toxicological characteristics

Powders can be irritating to the skin, eyes and respiratory tract. May cause sensitization by skin contact. May cause gastric irritation, nausea and vomiting. Ingestion of large amounts may lead to chemical burns in stomach and intestines, along with possible damage to blood cells, liver and kidney.

Delayed and immediate effects, as well as chronic effects from short and long – term exposure:

No deleterious effects known

Other information: None

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available on mixture. Data based on individual components shown below.

Potassium chlorate: LC50, Oncorhynchus mykiss (rainbow trout) 96 h –
1750 mg /l. Toxic to fish

12.2. Persistence and degradability

Not applicable. Contains inorganic material and is in form of solid article

12.3. Bioaccumulative potential

Mobility No test data on product

12.4. **Mobility in soil** None – product in form of solid article

12.5. **Results of PVB and vPvB assessment**

Pyrotechnourgiki Ltd

Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

Does not fulfill the criteria for classification as PVB or vPvB

12.6. Other adverse effects

Not a marine pollutant (IMDG code)

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of waste material

Waste should be kept in separate container. No smoking!

Destruction must only be done by experts. Used product may be disposed as ordinary plastic / metallic waste.

DO NOT TRY TO DISMANTLE THE PRODUCT!

Contaminated packing: May burn rapidly

SECTION 14 TRANSPORT INFORMATION OF MSDS FOR Product: Floating smoke signal, orange

14.1 ADR/RID

UN No. : 0507 or 0197

Proper shipping name: Signals, smoke

Transport Class: 1.4S for UN 0507 or 1.4G for UN 0197

Packing Group: N/A

Packing Instruction: P135

(Packaging details: Combination UN Approved packaging 4GV/X - Outer Fiberboard box UN Approved 4GV, Secondary inner package (IP): PE Bag, Primary inner packages (IP): metal cans with plastic lids - insulation material for fire protection: vermiculite)

Label: 1.4

14.2 IMO-IMDG code

UN No. : 0507 or 0197

Proper shipping name: Signals, smoke

Transport Class: 1.4S for UN 0507 or 1.4G for UN 0197

Packing Group: N/A

Packing Instruction: P135

(Packaging details: Combination UN Approved packaging 4GV/X - Outer Fiberboard box UN Approved 4GV, Secondary inner package (IP): PE Bag, Primary inner packages (IP): metal cans with plastic lids - insulation material for fire protection: vermiculite)

Label: 1.4

14.3 ICAO/IATA

UN No. : 0507

Proper shipping name: Signals, smoke

Transport Class: 1.4S

Pyrotechnourgiki Ltd
Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

Packing Group: N/A

Packing Instruction: P135

(Packaging details: Combination UN Approved packaging 4GV/X - Outer Fiberboard box UN Approved 4GV, Secondary inner package (IP): PE Bag, Primary inner packages (IP): metal cans with plastic lids - insulation material for fire protection: vermiculite)

Label: 1.4

15. REGULATORY INFORMATION

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

Non specified

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on this mixture

16. OTHER INFORMATION

Inventories All information listed in EINECS

Sources of data used in this SDS

In-house data files

Literature such as Sax's dangerous properties of industrial materials, the RSC

Dictionary of substances and their effects, RTECS

CLP Annex VI, tables 3.1 and 3.2

Sources of key data used

Suppliers' safety data sheets

RTECS, EU ESIS web site

Version number 1.1

Date Prepared 20 Nov. 2012

R-phrases used in this document

R2	Risk of explosion by shock, friction, fire, or other sources of ignition
R8	Contact with combustible material may cause fire
R9	Explosive when mixed with combustible material
R20/22	Harmful by inhalation and if swallowed
R36/37/38	Irritating to eyes / respiratory system and skin
R43	May cause sensitization by skin contact
R50	Very toxic to aquatic organisms
R52/53	Harmful to aquatic organisms, may cause long term adverse effects to the aquatic environment

H - statements used in this document

H204 Fire or projection hazard

H271 may cause fire or explosion, strong oxidizer

H272 May intensify fire, oxidizer

H302 Harmful if swallowed

H315 Causes skin irritation

Pyrotechnourgiki Ltd

Safety data sheet

21 Nov. 2012

Product name: **Floating Smoke Signal, Orange**

Doc. Code: SDS Floating Smoke Signal, Orange Edition 1.1

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

Based on EU regulation 1907/2006 as amended by 453/2010

The current safety data sheet was defined by Pyrotechnourgiki Ltd on the basis of knowledge of the product at the date of issue.

Therefore, data provided in this form cannot 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 of 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 utilization of this product.
- To be cautious of possible risks faced when the product is used for other utilization than those for which it has been designed