

Safety Data Sheet

BIOFUME GREENHOUSE SMOKE GENERATOR

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY OR UNDERTAKING

Product Identifier

- 1.1. Tradename: BIOFUME GREENHOUSE GENERATOR
Contains Garlic Oil and Potassium chlorate
UFI: EY40-70QW-300A-SJYV

- 1.2. Relevant identified uses of the substance or mixture and uses advised against: Smoke Generator (FU)

1.3. Details of the supplier of the safety data sheet

Company: Octavius Hunt Ltd
Redfield, BRISTOL, BS5 9NQ, UK
Phone: +44 (0) 117 955 5304
Fax: +44 (0) 117 955 7875
Website: www.octaviushunt.co.uk
Email: info@octavius-hunt.co.uk

- 1.4. Emergency telephone number: + 44 (0) 7720 051020 (24h)

SECTION 2: HAZARDS IDENTIFICATION

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2.1 Classification of the substance or mixture

- Classification (Regulation (EC) No 1272/2008) [CLP/GHS]: Aquatic Chronic 3, H412
- Additional Information: For full text of Hazard and EU Hazard-statements: see section 16

2.2 Label elements

None

Signal word: N/A

SECTION 2: HAZARDS IDENTIFICATION (....)

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local / regional / international regulations.

Supplemental Hazard Information (EU)

- None

2.3 Other hazards

- Ignites readily. Product burns without a flame to give a dense white smoke.
- This product contains <1% respirable silica
- Not a PBT according to Reach Annex XIII
- Not a vPvB according to Reach Annex XIII

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: N.A.

3.2. Mixture

Contains the following hazardous ingredients or ingredients with a workplace exposure limit

Chemical Name	Conc.	CAS No.	EC No.	Classification according to Regulation (EC) No 1278/2008 (CLP).	REACH Registration Number	WEL/O EL
Garlic Essential Oil	6.5%	8000-78-0	-	Flam. Liq. H226; Acute Tox. H302.	-	No
Potassium chlorate	10 -20% w/w	3811-04-9	223-289-7	Ox. Liq. H271; Acute Tox. H302; Acute Tox 4 H332; Aquatic Chronic 2, H411	01-2119494917-18-xxxx	No
Quartz (crystalline silica)	<1%	14808-60-7	238-878-4	STOT RE 1, H372	-	Yes

Information to exposure limit values - see section 8.

SECTION 4: FIRST AID MEASURES

Rescuers should take suitable precautions to avoid becoming casualties themselves

4.1 Description of First Aid Measures General Advice:

Show this safety data sheet to the doctor in attendance

Contact with eyes:

If substance has got into eyes, immediately wash out with plenty of water for several minutes. Irrigate eyes thoroughly whilst lifting eyelids.

Remove contact lenses, if present and easy to do. Continue rinsing.

Contact with skin:

Take off contaminated clothing and wash it before reuse.

Wash affected area with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention

Inhalation:

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If unconscious, place person in recovery position

Apply artificial respiration only if patient is not breathing but **do not** use mouth to mouth resuscitation. Get immediate medical advice/attention.

Ingestion:

Rinse mouth with water (do not swallow).

Give 200-300mls (half pint) water to drink.

Do NOT induce vomiting. Get medical advice/attention.

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

Contact with eyes

- May cause redness and swelling.

Contact with skin

- May cause redness and irritation.

Ingestion

- May cause stomach pain.
- May cause nausea/vomiting.

Inhalation

- May cause shortness of breath.
- May cause coughing and tightness of chest.
- Prolonged and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness

4.3. Immediate Medical Attention

No information

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media:

- Suitable extinguishing media:
Sand/earth; foam; water spray; carbon dioxide.
- Unsuitable extinguishing media:
Do not use water jets; Dry agent extinguishers are unsuitable and should not be used.

5.2. Special Hazards arising from the mixture:

- Ignites readily.
- Contains an oxidising agent; may assist combustion.
- May form explosive dust/air mixtures.
- May give off irritating fumes (or gases) in a fire.
- Decomposition products may include oxygen, carbon oxides, nitrogen oxides.

5.3. Advice for fire-fighters:

- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.
- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

- No action shall be taken involving any personal risk or without suitable training.
- Only trained and authorised personnel should carry out emergency response.
- Avoid formation of dust.
- Shut off all ignition sources
- Personal precautions for non-emergency personnel: Avoid breathing dust/fume/gas/mist/vapours/spray; Avoid contact with skin and eyes; Wear protective clothing as per section 8; Wash thoroughly after handling; Eyewash bottles should be available.
- Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA).

6.2. Environmental precautions:

- Avoid release to the environment.
- Do not allow to enter public sewers and watercourses.
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities.

6.3. Methods and material for containment and cleaning up:

- Do not absorb spillage in sawdust or other combustible material.
- Avoid formation of dust.
- Shut off all ignition sources.
- Take action to prevent static discharges.
- Do not allow to enter public sewers and watercourses.

- Small spills Wipe up spillage with damp absorbent cloth or towel.
Wash spill site with water and detergent.

- Large spills Evacuate the area and keep personnel upwind.
Damp down to avoid dust generation.
Absorb spillage in earth or sand.
Sweep or shovel-up spillage and remove to a safe place.
Place in appropriate container.
Seal containers and label them.
Remove contaminated material to safe location for subsequent disposal.
Ventilate the area and wash spill site after material pick-up is complete.

6.4. Reference to other sections:

- See section(s): 7, 8 & 13

7.1. Precautions for safe handling

- Read the label before use.
- Prevent formation of dust.
- Take precautionary measures against static discharges.
- Ensure adequate ventilation.
- In case of inadequate ventilation wear respiratory protection.
- Avoid contact with skin and eyes.
- Do not eat, drink or smoke when using this product.
- Keep away from heat and sources of ignition.
- Avoid contact with acids and alkalis.
- Avoid release to the environment.
- Take off contaminated clothing.
- Contaminated work clothing should not be allowed out of the workplace.
- Contaminated clothing should be laundered before reuse.
- Eyewash bottles should be available.

7.2. Conditions for storage, including any incompatibilities

- Shelf life: 2 years when stored in the original unopened sales container at ambient temperatures.
- Store in a cool, dry well-ventilated place. Keep container tightly closed.
- Keep away from combustible material.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep out of reach of children.

7.3. Specific end use

A smoke generator for plant health.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

- For currently recommended monitoring procedures, see HSE series 'Methods for the Determination of Hazardous Substances' (MDHS).
- Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

- Potassium chlorate

DNEL (inhalational) 5.76 mg/m³ Industry, Long Term, Systemic Effects

DNEL (dermal) 3.5 mg/kg (bw/day) Industry, Long Term, Systemic Effects

DNEL (inhalational) 300 ug/m³ Consumer, Long Term, Systemic Effects

DNEL (dermal) 130 ug/kg (bw/day) Consumer, Long Term, Systemic Effects

DNEL (oral) 60 ug/kg (bw/day) Consumer, Long Term, Systemic Effects PNEC aqua (freshwater)

1.15 mg/l PNEC aqua (marine water) 1.15 mg/l PNEC (STP) 115 mg/l PNEC terrestrial (soil) 3.83 mg/kg

- Quartz (crystalline silica)

(EU) OELV (long term TWA) 0.1 mg/m³

WEL (long term) 0.1 mg/m³ (UK)

8.2. Exposure controls

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential.

- Hygiene measures

Contaminated clothing should be laundered before reuse.

Do not eat, drink or smoke when using this product.

- Environmental exposure controls

Avoid release to the environment.

Do not empty into drains

Self-contained product unlikely to be released unless damaged.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Colour:	Off-white.
Physical State:	Powder in polypropylene container.
Odour:	Characteristic garlic
Melting Point:	Not applicable.
Boiling point:	Not applicable.
Flash-Point:	Does not flash.
Autoignition temperature	Not available
Minimum Ignition temp.	Not available.
Minimum Ignition:	>130°C
Oxidizing properties:	Contains an oxidising agent; may assist combustion.
Energy Explosive properties	Not applicable
Vapour pressure:	Not available.
Solubility:	Partly soluble in/with water.
pH-value (quant.):	Not available.
Partition coeff. (n-octanol/water):	Not available.
Bulk Density:	Not available

9.2 Other Information:

- No information available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

- No hazardous reactions known if used for its intended purpose

10.2 Chemical stability

- Considered stable under normal conditions.

10.3 Possibility of hazardous reactions

- Reacts with combustible material.
- Reacts with acids liberating toxic gas (chlorine).

10.4 Conditions to avoid

- Avoid formation of dust.
- Keep away from heat and sources of ignition.
- Keep away from static electricity.

10.5 Incompatible materials

- Incompatible with strong acids.
- Incompatible with alkalis (strong bases).
- Incompatible with halogenated substances.

10.6 Hazardous decomposition products

- Decomposition products may include oxygen, carbon oxides, nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- Acute Toxicity

Based on available data, the classification criteria are not met.

Chemical name	LD50 (oral, rat)	LC50 (inhalation, rat)	LD50 (dermal, rabbit)
Garlic essential oil	No data available	No data available	No data available
Potassium chlorate	500 mg/kg	5 mg/l (4 hr)	NS
Quartz (crystalline silica)	No data available	No data available	No data available

- Skin corrosion/irritation

Based on available data, the classification criteria are not met.

- Serious eye damage/irritation

Based on available data, the classification criteria are not met.

- Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

- Germ cell mutagenicity Based on available data, the classification criteria are not met.

Quartz (SiO₂) is listed in Annex III of REACH as # Suspected mutagen: The outcome in CTA assay is positive according to ISSCTA.

- Carcinogenicity Based on available data, the classification criteria are not met.

Quartz (SiO₂) is listed in Annex III of REACH as # Suspected carcinogen: IARC monographs classified the substance as carcinogenic or probably/possibly carcinogenic.

Crystalline silica in the form of quartz or cristobalite dust is carcinogenic to humans (Group 1). (IARC Monograph 100, 2012).

Exposure in high concentrations or over prolonged periods of time can lead to lung disease (silicosis) and an increased risk of lung cancer.

- Reproductive toxicity Based on available data, the classification criteria are not met.

- Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

- Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

- Aspiration hazard

Based on available data, the classification criteria are not met.

- Contact with eyes

May cause redness and swelling.

- Contact with skin

May cause redness and irritation.

- Ingestion

May cause stomach pain.

May cause nausea/vomiting.

- Inhalation Causes shortness of breath.

May cause coughing and tightness of chest.

Prolonged and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

- Harmful to aquatic life with long lasting effects.
- Classification based on calculation and concentration thresholds.

- Potassium chlorate

LC50 (fish) 1 g/l (4 days)

EL50 (aquatic invertebrates) 1 g/l (48 hr)

EL50 (aquatic algae) 1.9 - 500 mg/l (72 hr)

12.2 Persistence and degradability

- Potassium chlorate Biodegradable

12.3 Bio accumulative potential

- Chlorate is converted to chlorite in plants, which accumulates in cells until toxic concentrations are reached, when the plant dies

12.4 Mobility in soil

- No information available

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

12.6 Other adverse effects

- No information available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Dispose of product and packaging in accordance with national waste regulations.

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC).
- Hazardous Property Code(s): HP 14 Ecotoxic

SECTION 14. TRANSPORT INFORMATION

Not classified as hazardous for transport

14.1 UN number

- UN No.: Not applicable

14.2 UN proper shipping name

- Proper Shipping Name: Not applicable

14.3 Transport hazard class(es)

- Hazard Class: Not applicable

14.4 Packing group

- Packing Group: Not applicable

14.5 Environmental hazards

- Not Classified

14.6 Special precautions for user

- Not Classified

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Not applicable

14.8 Road/Rail (ADR/RID)

- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.9 Sea (IMDG)

- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable - IMDG Hazard Class: Not applicable
- IMDG Pack Group.: Not applicable

14.10 Air (ICAO/IATA)

- Proper Shipping Name: Not applicable
 - ICAO UN No.: Not applicable - ICAO Hazard Class: Not applicable –
 - ICAO Packing Group: Not applicable
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SECTION 15. REGULATORY INFORMATION

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

- This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830.
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe.
- The COSHH Regulations apply in the UK.
- Quartz (crystalline silica) is listed in Annex III of REACH as # Suspected carcinogen: IARC monographs classified the substance as carcinogenic or probably/possibly carcinogenic # Suspected mutagen: The outcome in CTA assay is positive according to ISSCTA.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Information contained in this data sheet is accurate to the best of our knowledge and belief and is given in good faith. It is intended to describe our product from the point of view of safety requirements and is not intended to guarantee any particular properties.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 3.1. Revised March 2020.

Changes made: Revised to add in H332 to potassium chlorate in table 3.2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Aquatic Chronic 3, H412: Classification based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H271: May cause fire or explosion; strong oxidiser
- H226: Flammable Liquid and vapour
- H302: Harmful if swallowed
- H332: Harmful if inhaled
- H372: Causes damage to organs through prolonged or repeated exposure

Acronyms

- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC50: Effective Concentration, 50%
- GHS: Globally Harmonised System
- IARC: International Agency for Research on Cancer
- IC50: Half-maximal inhibitory concentration
- LC50: Lethal Concentration, 50%
- LD50: Lethal Dose, 50%
- NOAEC: No observed adverse effect concentration
- NOAEL: No observed adverse effect level
- NOEC: No observed effect concentration
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

Previous revisions should be destroyed.
