

Hop Oil

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product Identifier: Hop Oil

1.2 Synonyms: Hops Oil, Hop Oil HAL, Hop Oil No 1, Varietal Hop Oil, Hop Oil Type Dry, Humulene Rich Oil, Hop Oil Saaz Saazer

1.3 Relevant Uses: This product is manufactured for use as a flavouring preparation for foods and beverages. Hops are a traditional ingredient of beer. Not for direct consumption as an undiluted product..

1.4 Supplier: BarthHaas / BarthHaas UK

**1.5 Emergency
Contact Details:**

BarthHaas / BarthHaas UK
Hop Pocket Lane, Paddock Wood, Kent, TN12 6DQ, UK
Emergency phone: +44 1892 833 415 (09:00 - 17:30 Mon-
Thurs; 09:00 - 16:30 Fri, UK time)
Email: enquiries@barthhaas.co.uk

2. HAZARDS IDENTIFICATION

2.1 Classification:

Classification according to Regulation (EC) No 1272/2008

Aspiration Toxicity (Category 1)

Classification according to EU Dangerous Substances Directive (67/548/EEC)

Harmful: may cause lung damage if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic Chronic 3

2.2 Label Elements:

Labelling according to Regulation (EC) No 1272/2008

Pictogram:



Signal Word: Danger

Hazard Statements:

H304 May be fatal if swallowed and enters airways

H413 May cause long lasting harmful effects to aquatic life

Precautionary Statements:

P273: Avoid release to the environment

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331: Do NOT induce vomiting

P405 Store locked up

P501: Dispose of contents/container in accordance with local and national regulations.

2.3 Other Hazards:

None

3. COMPONENTS/INFORMATION ON INGREDIENTS

Hop oil

CAS number: 8007-04-3

4. FIRST AID MEASURES

4.1 Description of First Aid Methods:

- Inhalation:** Move the exposed person to fresh air. Obtain medical attention if discomfort persists.
- Skin contact:** Wash skin thoroughly with soap and water.
- Eye contact:** Wash eye with plenty of water. Obtain medical attention if irritation persists.
- Oral ingestion:** Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2 Most important Symptoms and Effects

May be fatal if swallowed and enters airways

4.3 Indications of Immediate Medical Attention or Special Treatment

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

5. FIRE AID MEASURES

5.1 Extinguishing media:

Carbon dioxide, dry powder and foam.

5.2 Special Hazards Arising from Substance

Hop oil is combustible and may give rise to hazardous fumes in a fire.

5.3 Advice for Firefighters:

Fire fighters should wear self-contained positive pressure breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Protection:

Wear appropriate protective clothing - see Section 8.

6.2 Environmental Precautions:

Do not discharge onto the ground or into watercourses. Advise authorities if such spillage does occur.

6.3 Methods for Cleaning Up:

Contain spillage using earth, sand or other inert material
Transfer to suitable sealed container prior to disposal.

7. HANDLING AND STORAGE

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|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1 Precautions for Safe Handling: | Use only in well ventilated areas. Avoid inhalation of vapours, spilling, skin and eye contact. |
| 7.2 Conditions for Safe Storage: | Keep container closed when not in use. Keep away from heat and from sources of ignition. Suitable storage is high-grade stainless steel, glass or aluminium. Store in a cool place |
| 7.3 Specific End Uses: | The substance is manufactured from food ingredients and it is for use as a processing aid during the manufacture of foodstuffs. It is therefore not subject to registration via REACH (Regulation (EC) No.1907/2006) for such uses. It should be used in accordance with applicable food legislation. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------------|------------------------------------------------------------------------------|
| 8.1 Control Parameters: | Not applicable. |
| 8.2 Exposure Controls | |
| <u>Engineering Controls:</u> | Provide adequate ventilation. Minimize the risk of inhalation of vapours. |
| <u>Eye/Face Protection:</u> | If danger of splashing wear chemical goggles. |
| <u>Hand Protection:</u> | PVC or rubber gloves. |
| <u>Skin Protection:</u> | If danger of splashing wear PVC or rubber apron. |
| <u>Respiratory Protection:</u> | Not normally required |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-----------------------------------|----------------------------------|
| Appearance: | Yellow/brown liquid |
| Odour: | Characteristic |
| Odour Threshold: | Not measured |
| pH: | N/A |
| Freezing Point: | Not measured |
| Boiling Point: | Not measured |
| Flash Point: | >60 °C |
| Evaporation Rate: | Not measured |
| Flammability: | No data available |
| Upper/Lower Flammability: | Not measured |
| Vapour Pressure: | Not measured |
| Vapour Density: | Not measured |
| Density (kg/m³) | 850 - 910 kg.m ⁻³ |
| Solubility in Water: | Insoluble |
| Partition Coefficient: | Not measured |
| Auto-ignition Temperature: | Not measured |
| Decomposition Temperature: | Not measured |
| Viscosity at 20 °C: | 3.9 cP measured for Hop Oil HAL. |
| Explosive properties: | No data available |
| Oxidising properties: | No data available |

10. STABILITY AND REACTIVITY

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|-------------------------------------------------|------------------------------------------------------------------------------------------|
| 10.1 Reactivity: | No reactivity hazards known |
| 10.2 Chemical Stability: | Stable if stored in accordance with 7.2 and 10.5 |
| 10.3 Possibility of Hazardous Reactions: | None known. |
| 10.4 Conditions to Avoid: | Keep container closed when not in use. Keep away from heat and from sources of ignition. |
| 10.5 Incompatible Materials: | Oxidising agents |
| 10.6 Hazardous Decomposition Products: | None known |

11. TOXICOLOGICAL INFORMATION

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|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.1 Acute Toxicity: | LD ₅₀ oral, mouse: 3,500 mg.kg ⁻¹ . LD ₅₀ oral, rat: 2,700 mg.kg ⁻¹ . <i>Source:</i> United States National Library of Medicine, ChemIDplus Lite |
| 11.2 Skin Corrosion/Irritation | No data available |
| 11.3 Serious Eye Damage/ Irritation: | No data available |
| 11.4 Respiratory or Skin Sensitisation: | No data available on hop oil. Hazardous Substances Data Bank (HSDB) includes a reference to myrcene (CAS 123-35-3), which is a component of hop oil: "a 28-yr old man employed as a brewery inspector is presented with resp hypersensitivity reaction to beta-myrcene component of Humulus lupulus (hops). dermatitis, sneezing, itching & increased nasal congestion are reported 6 months prior to the presenting symptom complex." |
| 11.5 Germ Cell Mutagenicity: | No data available. |
| 11.6 Carcinogenicity: | No data available |
| 11.7 Reproductive Toxicity: | No data available |
| 11.8 STOT-Single Exposure: | No data available |
| 11.9 STOT-Repeated Exposure: | No data available |
| 11.10 Aspiration Hazard: | Hop oil is classified by the European Flavour Association Aspiration Toxicity (Category 1) due to its hydrocarbon content and viscosity. Hop oil typically contains the following hydrocarbons as major components: myrcene, humulene, caryophyllene, farnesene. The kinematic viscosity of hop oil HAL at 40 °C is 2.75 mm ² .s ⁻¹ . |

12. ECOLOGICAL INFORMATION

12.1 Toxicity: No data available. Hop oil is classified by ECHA (REACH Regulation) as R52/53 "Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment", due to the presence of limonene at ~1%. Hop oil is extracted from hops (*Humulus lupulus*) and is a natural product - considered biodegradable..

12.2 Persistence and Degradability: Hop oil is extracted from hops (*Humulus lupulus*) and is a natural product - considered biodegradable..

12.3 Bioaccumulative Potential: No data available. Hop oil is extracted from hops (*Humulus lupulus*) and is a natural product - considered biodegradable and not expected to bioaccumulate.

12.4 Mobility in Soil: No data available

**12.5 Results of PBT Exposure:
And vPvB Assessment:** No data available. Hop oil is extracted from hops (*Humulus lupulus*) and is a natural product - considered biodegradable.

12.6 Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATIONS

Product disposal: Dispose in accordance with all applicable local and national regulations.

Container disposal: Labels should not be removed from containers until they have been cleaned. Contaminated containers should not be treated as household waste. Containers should be cleaned using appropriate methods and then re-used or disposed of by landfill or incineration as appropriate.

14. TRANSPORT INFORMATION

14.1 UN-Number: Non-hazardous for transport.

14.2 Shipping Name: N/A

14.3 Transport Hazard Class: Non-hazardous for transport.

14.4 Packing group: Non-hazardous for transport.

14.5 Marine pollutant: No data available

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations: No data available

15.2 Chemical Safety Assessment: No data available

16. OTHER INFORMATIONS

The information in this safety data sheet is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on our present knowledge and should be used only as a supplement to information already in your possession concerning this product. It does not represent any guarantee of the properties of the product. The determination of whether and under what condition the product should be used is yours to make. We do not accept any liability for loss, injury or damage that may result from its use.