



Hop Oil Emulsions

Safety Data Sheet

Hop Oil Emulsions are not classified as dangerous products according to European Union legislation, and their use is as a flavouring preparation, for example in the brewing of beer. However, this safety data sheet is provided voluntarily according (as appropriate) to the principles of the Classification, Labelling and Packaging Regulations (Regulation (EC) No. 1272/2008).

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product Identifier	Hop Oil Emulsion
1.2 Synonyms	CO ₂ Hop Oil Emulsion, MD Hop Oil Emulsion, Botanix Hop Oil Emulsion – this MSDS is suitable for all of the named products
1.3 Relevant Uses	This product is manufactured for use as a flavoring preparation for foods and beverages. 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	Not classified (Regulation (EC) No. 1272/2008) Not classified (Directive 67/548/EEC)
2.2 Label Elements	N/A (not classified)
2.3 Other Hazards	None



3. COMPONENTS/INFORMATION ON INGREDIENTS

Component	Concentration	Cas no.	FEMA no.	Hazard Classification of the individual component
Hop oil	0.1% - 1% v/v	8007-04-3	2580	Regulation (EC) No 1272/2008: Aspiration Toxicity (Category 1). 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.
Permitted emulsifiers	<0.5% w/v	-	-	Non-hazardous: included for information only
Water	Balance	-	-	Non-hazardous: included for information only

4. FIRST AID MEASURES

4.1 Description of First

Aid Methods:

- Inhalation
- Skin Contact
- Eye Contact
- Oral Ingestion

- Move the exposed person to fresh air. Obtain medical attention if discomfort persists.
- Wash skin thoroughly with soap and water.
- Wash eye with plenty of water. Obtain medical attention if irritation persists..
- Rinse mouth with water provided person is conscious. Do not induce vomiting. Obtain medical attention.

4.2 Most important

symptoms and Effects

- Inhalation
- Skin Contact
- Eye Contact
- Oral Ingestion

- Low risk due to high aqueous content.
- Prolonged contact may cause dermatitis
- May cause irritation.
- A large dose may cause irritation of mouth, throat and digestive tract.

4.3 Indications of

Immediate Medical

N/A

5. FIRE AID MEASURES

5.1 Extinguishing Media

Dry powder, foam or carbon dioxide

5.2 Special Hazards

Arising from Substance

Hop oil may give rise to hazardous fumes in a fire. However, the product is an aqueous emulsion and is therefore not expected to burn. No known unusual fire or explosion hazards.

5.3 Advice for Firefighters

Wear self-contained 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

- 7.1 Precautions for Safe Handling** Use only in well ventilated areas. Avoid inhalation of vapors, spilling, skin and eye contact
- 7.2 Conditions for Safe Storage** Unopened containers can be stored for up to 6 months at 3 - 6 °C prior to use. Avoid storage of partly used containers since sterility may be compromised
- 7.3 Specific End Uses** The substance is manufactured for use as a food ingredient and for such uses is not subject registration via REACH (Regulation (EC) No.1907/2006). 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:

- | | |
|---------------------------------|---|
| - Engineering Controls | - Provide adequate ventilation. Minimize the risk of inhalation of vapors |
| - Eye/Face Protection | - If danger of splashing wear chemical goggles. |
| - Hand Protection | - PVC or rubber gloves. |
| - Skin Protection | - If danger of splashing wear PVC or rubber apron. |
| - Respiratory Protection | - Not normally required |



9. PHYSICAL AND CHEMICAL PROPERTIES

a) Physical state	Liquid
b) Color	White to yellow
c) Odor	Hoppy, resinous
d) Melting point/Freezing point	Not practical to measure
e) Boiling point	Not practical to measure
f) Flammability	Non flammable
g) Lower and upper explosion limit	Not practical to measure
h) Flash point	Not practical to measure
i) Auto-ignition temperature	Not practical to measure
j) Decomposition temperature	Not practical to measure
k) pH	Not practical to measure
l) Kinematic viscosity	Not practical to measure
m) Solubility	Not practical to measure
n) Partition coefficient n-octanol/water (log value)	Not practical to measure
o) Vapor pressure	Not practical to measure



- p) Density [kg/m³]** Ca. 1.000
- q) Relative vapor density** Not applicable
- r) Particle characteristics** Not practical to measure

10. STABILITY AND REACTIVITY

- 10.1 Reactivity** No reactivity hazards known.
- 10.2 Chemical Stability** Stable if stored according to Section 7.2 and 10.5
- 10.3 Possibility of Hazardous Reaction** None known
- 10.4 Conditions to Avoid** Product needs cold storage at 3 – 6 °C. Avoid storage of partly used containers as sterility may be compromised – see Section 7.2.
- 10.5 Incompatible Materials** None known
- 10.6 Hazardous Decomposition Products** None known

11. TOXICOLOGICAL INFORMATION

- 11.1 Acute Toxicity** No data available. Due to the concentration and nature of the ingredients, the product is not classified as hazardous
- 11.2 Skin Corrosion/Irritation** No data available
- 11.3 Serious Eye Damage/Irritation** No data available
- 11.4 Respiratory or Skin Sensitization** No data available
- 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 present at $\geq 1\%$ in an aqueous emulsion and thus the product does not present an aspiration hazard, and it is not classified as hazardous

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity	No data available. Due to the concentration and nature of the ingredients, the product is not classified as hazardous.
12.2 Persistence and Degradability	Hop oil is extracted from hops (<i>Humulus lupulus</i>) and is a natural product - considered biodegradable
12.3 Bioaccumulative Potential	No data available
12.4 Mobility in Soil	No data available
12.5 Results of PBT Exposure:	No data available
12.6 Other Adverse Effects Exposure	No data available



13. DISPOSAL CONSIDERATIONS

- 13.1 Product Disposal** Dispose in accordance with all applicable local and national regulations.
- 13.2 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** Non-hazardous for transport
- 14.6 Special Precautions** No data available

15. REGULATORY INFORMATION

- 15.1 Safety, Health, and Environmental Regulations** Not classified (Regulation (EC) No. 1272/2008)
Not classified (Directive 67/548/EEC)
The substance is made from food ingredients and is for use in the manufacture of foodstuffs and is therefore not subject to registration via REACH (Regulation (EC) No. 1907/2006).
- 15.2 Chemical Safety Assessments** No data available

16. OTHER INFORMATION

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.

