



# Spectrum

## Safety Data Sheet

### 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

**1.1 Product Identifier**      **Spectrum**

**1.2 Synonyms**

**1.3 Relevant Uses**              For use as an ingredient in foods

**1.4 Supplier**                      **BarthHaas / BarthHaas UK Ltd.**

**1.5 Emergency Contact Details**      **BarthHaas / BarthHaas UK Ltd.**  
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](mailto:enquiries@barthhaas.co.uk)

## 2. HAZARD IDENTIFICATION

### 2.1 Classification

Classification according to Regulation (EC) No 1272/2008 [CLP]:

- Skin Irritation Category 2
- Eye Irritation Category 2
- Skin Sensitisation Category 1

### 2.2 Label Elements

According to Regulation (EC) 1272/2008 [CLP]:

- **Hazard  
Pictogram**



- **Signal Word:**

- **Warning**

- **Hazard  
Statement**

- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H319: Causes serious eye irritation

- **Precautionary  
Statement**

- P280: Wear protective gloves and eye protection
- P302+P352: IF ON SKIN: Wash with plenty of soap and water
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

### 2.3 Other Hazards

None



### 3. COMPONENTS/INFORMATION ON INGREDIENTS

Hop Extracts, CAS: 8060-28-4, EINECS No. 232-504-3

### 4. FIRST AID MEASURES

#### 4.1 Description of First

##### Aid Methods:

- **Inhalation**
  - **Skin Contact**
  - **Eye Contact**
  - **Oral Ingestion**
- Move to fresh air.
  - Wash skin thoroughly with soap and water
  - Flood the eye with plenty of water. Obtain medical attention if irritation persists.
  - Rinse mouth out with water and drink a portion of water (ca. 200 ml). Vomiting may occur but should not be induced Consult a physician if any symptoms persist.

#### 4.2 Most important symptoms and Effects

Skin and eye irritation

#### 4.3 Indications of Immediate Medical

Action as indicated in Section 4.1 above

### 5 FIRE AID MEASURES

**5.1 Extinguishing Media** Carbon dioxide, dry powder, foam.

**5.2 Special Hazards** Contains hop oil. Hop oil is combustible and may give rise to hazardous  
**Arising from Substance** fumes in a fire

**5.3 Advice for** Wear self-contained breathing apparatus  
**Firefighters**



## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Protection**      Wear appropriate protective clothing – see Section 8.
- 6.2 Environmental Precautions**      Avoid sub-soil penetration. Prevent entry to sewers and public waters.  
Do not discharge onto the ground or into watercourses
- 6.3 Methods for Cleaning Up**      Contain spillage using earth, sand or other inert material.  
Transfer to suitable sealed container prior to disposal.  
Flush area with hot soapy water to remove final traces. Use adequate ventilation or a respirator if in a confined area.

## 7. HANDLING AND STORAGE

- 7.1 Precautions for Safe Handling**      Use appropriate protective clothing as indicated in Section 8. Wash hands after use
- 7.2 Conditions for Safe Storage**      Store at 2 – 15 °C. Suitable storage is high grade stainless steel, glass, high-density polyethylene and high phenolic lacquered mild steel
- 7.3 Specific End Uses**      For use as a food ingredient. It should be used in accordance with applicable legislation.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Control Parameters**      Not applicable.

### 8.2 Exposure Controls:

- |                                 |  |
|---------------------------------|--|
| - <b>Engineering Controls</b>   | - Provide adequate ventilation.                    |
| - <b>Eye/Face Protection</b>    | - Chemical goggles must be worn during handling.   |
| - <b>Hand Protection</b>        | - PVC, rubber or nitrile gloves                    |
| - <b>Skin Protection</b>        | - If danger of splashing, wear PVC or rubber apron |
| - <b>Respiratory Protection</b> | - Not normally required                            |



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>a) Physical state</b>	Thick liquid
<b>b) Color</b>	Brown
<b>c) Odor</b>	Hoppy, resinous
<b>d) Melting point/Freezing point</b>	Not practical to measure
<b>e) Boiling point</b>	Not practical to measure
<b>f) Flammability</b>	Not flammable
<b>g) Lower and upper explosion limit</b>	Not practical to measure
<b>h) Flash point</b>	ca. 80 °C (176 °F) or above, depending on variety
<b>i) Auto-ignition temperature</b>	Not practical to measure
<b>j) Decomposition temperature</b>	No hazardous decomposition when used for its intended use.
<b>k) pH</b>	Not practical to measure
<b>l) Kinematic viscosity</b>	Approx. 5000 cP
<b>m) Solubility</b>	Readily dispersible
<b>n) Partition coefficient n-octanol/water (log value)</b>	Not practical to measure
<b>o) Vapor pressure</b>	Not practical to measure



<b>p) Density [kg/m³]</b>	1.110 – 1.300
<b>q) Relative vapor density</b>	Not practical to measure
<b>r) Particle characteristics</b>	Not practical to measure

## 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	No reactivity hazards known.
<b>10.2 Chemical Stability</b>	Stable if stored according to Section 7.2 and 10.5
<b>10.3 Possibility of Hazardous Reaction</b>	None known
<b>10.4 Conditions to Avoid</b>	Keep container closed when not in use; avoid high temperatures.
<b>10.5 Incompatible Materials</b>	None known
<b>10.6 Hazardous Decomposition Products</b>	None known



## 11. TOXICOLOGICAL INFORMATION

Hop extracts have a long history of safe use as a beer ingredient.

<b>11.1 Acute Toxicity</b>	Typical hop extracts are not classified as hazardous. Estimated ATE values (oral, dermal) are > 2000 mg/kg bw.
<b>11.2 Skin Corrosion/Irritation</b>	Skin irritation Category 2.
<b>11.3 Serious Eye Damage/Irritation</b>	Eye irritation Category 2.
<b>11.4 Respiratory or Skin Sensitization</b>	Skin Sensitization Category 1.
<b>11.5 Germ Cell Mutagenicity</b>	OECD Guideline 471 (Bacterial Reverse Mutation Assay) not mutagenic. Bacterial Reverse Mutation Assay on 40 % beta-acids: not mutagenic.
<b>11.6 Carcinogenicity</b>	Hop extracts have a long history of safe use as a component of beer. Bacterial reverse mutation assay: not mutagenic.
<b>11.7 Reproductive Toxicity</b>	Weight of evidence indicates lack of reproductive toxicity. Long history of safe use as a component of beer. Hop extracts are generally recognized as safe (GRAS) in accordance with US FDA regulation 21 CFR 182.20.
<b>11.8 STOT- Single Exposure</b>	Weight of evidence indicates safety when used for its intended use. See (11.7) above.
<b>11.9 STOT-Repeated Exposure</b>	Weight of evidence indicates safety when used for its intended use. See (11.7) above.
<b>11.10 Aspiration Hazard</b>	Not hazardous

## 12. ECOLOGICAL INFORMATION

<b>12.1 Ecotoxicity</b>	Toxicity to fish: <i>Carassius auratus</i> (goldfish) - Etude pharmacologique de l'action du lupulin et de la fleur d'organer sur le poisson. <i>Pharmaceutica acta</i>
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*Helvetiae* (1953) **28**(7-8), pp.183-206: lowest dose causing adverse effects estimated by calculation as *ca.* 80 mg/l. Toxicity to *Daphnia* and other aquatic invertebrates:

EC50 - *Daphnia magna* (Water flea) - >5.8 mg/l - 48 h. NOEC

- *Daphnia magna* - *ca.* 2.2 mg/l - 48 h.

Toxicity to freshwater algae:

EC50 - 42.7 mg/l - 48 h. NOEC - 12.5 mg/l - 72 h.

## 12.2 Persistence and Degradability

Hop extract: Ultimate biodegradation (natural product).

## 12.3 Bioaccumulative Potential

Hop extract: Natural product, not expected to bioaccumulate.

## 12.4 Mobility in Soil

Hop extract: Log Koc 1.7 - <4.5 (modelling by EPISuite™)

Other information:

low hazardous to water. Water contaminant class 1 (self assessment) according

to VwVwS from May 17th 1999 appendix 3. Do not discharge onto the ground or into watercourses.

## 12.5 Results of PBT Exposure:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 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:** Not data available

## 15. REGULATORY INFORMATION

- 15.1 Safety, Health, and Environmental Regulations** Germany: Water contaminant class 1 (self assessment) according to VwVwS from May 17th 1999 appendix 3. Do not discharge onto the ground or into watercourses.
- 15.2 Chemical Safety Assessments** N/A when used for food applications



## 16. OTHER INFORMATION

(a) Key literature references and sources for data:

- REACH registration dossier for EC 232-504-3

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

- Skin Irritation Category 2: *in vitro* test data for REACH registration dossier for EC 232-504-3
- Eye Irritation Category 2: *in vitro* test data for REACH registration dossier for EC 232-504-3
- Skin Sensitisation Category 1: *in vitro* test data for REACH registration dossier for EC 232-504-3

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.