

RAW HOPS

Safety Data Sheet

Hop Pellets are not classified as dangerous products according to European Union legislation, and their use is as a food product 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: Raw Hops

1.2 Synonyms: Baled Hops, Cone Hops, Leaf Hops

1.3 Relevant Uses: For use as an ingredient in the brewing of beer

1.4 Supplier: BarthHaas / BarthHaas UK Ltd.

1.5 Emergency Contact Details: 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

BarthHaas / John I. Haas, Inc.
1600 River Rd., Yakima, WA 98902, USA.
Emergency phone: +1 509 469 4000 (office hours)
Email: info@johnihaas.com

Hopfenveredlung St. Johann GmbH
Mainburger Str. 15, 93358 St. Johann, Germany
Emergency phone: +49 9444 878 0 (office hours)
Email: contact@hopfenveredlung.de

Hop Products Australia
26 Cambridge Road, Bellerive, Tasmania, Australia 7018.
Emergency phone: +61 3 6282 2000 (office hours)
Email: info@hops.com.au

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: Associated dust may be irritating to eyes, mouth and throat.

3. COMPONENTS/INFORMATION ON INGREDIENTS

The product consists entirely of hop cones of the cultivated hop plant *Humulus lupulus*. Many different varieties.

4. FIRST AID MEASURES

4.1 Description of First Aid Methods:

<u>Inhalation:</u>	Move to fresh air
<u>Skin contact:</u>	Brush off excess material and wash skin thoroughly with soap and water.
<u>Eye contact:</u>	Flood the eye with plenty of water. If any symptoms persist obtain medical attention
<u>Oral Ingestion:</u>	Drink large amounts of water to dilute. Vomiting may occur but should not be induced. Obtain medical attention if symptoms persist.

4.2 Most Important Symptoms and Effects:

None known. See Section 2.3.

4.3 Indications of Immediate Medical Attention or Special Treatment:

None known

5. FIRE AID MEASURES

5.1 Extinguishing media:

Carbon dioxide, dry powder and foam.
Keep containers and surroundings cool with water spray. Great care should be taken using water/jet spray.

5.2 Special Hazards Arising from Substance:

Not known

5.3 Advice for Firefighters:

Firefighters 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.

6.3 Methods for Cleaning Up:

Normal clean-up procedures as for any agricultural commodity.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling: Do not generate excessive dust. Avoid excessive contact with product
Use appropriate protective clothing as indicated in Section 8. Wash hands after use

7.2 Conditions for Safe Storage: To guarantee quality avoid heat, moisture and strong odours during storage. Raw Hops should not be exposed to temperatures above 20 °C (68 °F) since it is possible that gases are formed from hop constituents. The resulting pressure increase may cause bursting of the foils. Consequently the raw hops will be exposed to air and oxidation resulting in a considerable deterioration of quality. Suitable storage containers are thick gauge laminated foil bags, hessian or plastic bags. Best storage is in a cold (-2 to 4°C, 28 to 39 °F) dry area, protected from weather influences and foreign odours. Maximum moisture content should be 12%.

7.3 Specific End Uses: The substance is manufactured for use as a food ingredient and for such uses is not subject to 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

<u>Engineering Controls:</u>	Provide adequate ventilation.
<u>Eye/Face Protection:</u>	If in danger of splashing, wear chemical goggles
<u>Hand Protection:</u>	Gloves possible (not mandatory)
<u>Skin Protection:</u>	Gloves possible (not mandatory)
<u>Respiratory Protection:</u>	If in danger of generating dust, wear a facemask.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Whole hop cones, sometimes compressed. Various shades of green
Odour:	Characteristic, typical hoppy, depends on variety
Odour Threshold:	No data available.
pH:	No data available.
Freezing Point:	No data available.
Boiling Point:	No data available.
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability:	No data available.
Upper/Lower Flammability:	No data available.
Vapour Pressure:	No data available.
Vapour Density:	No data available.
Density (kg/m³)	450 - 700 (80 - 200 if not compressed)
Solubility in Water:	Insoluble
Partition Coefficient:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity at 20 °C:	No data available.
Explosive properties:	No data available.
Oxidising properties:	No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity: No reactivity hazards known.

10.2 Chemical Stability: Stable if stored according to Section 7.2.

10.3 Possibility of Hazardous Reactions: None known.

10.4 Conditions to Avoid: See Section 7.2

10.5 Incompatible Materials: None known

10.6 Hazardous Decomposition Products: None known

11. TOXICOLOGICAL INFORMATION

11. Acute Toxicity: No data available. Hops and hop extracts are generally recognized as safe (GRAS) for their intended use in accordance with US FDA regulation, 21 CFR 170.30(c) and 170.3(f). Supported by a long history of safe use in brewing.

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

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: No data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity: No data available

12.2 Persistence and Degradability: No data available. All-natural product.

12.3 Bioaccumulative Potential: No data available. All-natural product, not expected to bioaccumulate.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT And vPvB Assessment: No data available

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

UN-Number: Non-hazardous for transport

Class: Non-hazardous for transport

Shipping name: N/A

Packing group: Non-hazardous for transport

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.