

BarthHaas® LUPOMAX®®

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: Hop Pellets

1.2 Synonyms: Kettle Pellets, Hop Pellets, Lupulin Enriched Hop Pellets

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

1.4 Supplier: BarthHaas / John I. Haas, Inc.

**1.5 Emergency
Contact Details:**

BarthHaas / John I. Haas, Inc.
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Email: contact@hopfenveredlung.de

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 pelleted hop cones of the cultivated hop plant *Humulus lupulus* that have been enriched by physical means. Many different varieties and degrees of enrichment.

4. FIRST AID MEASURES

4.1 Description of First Aid Methods:

- Inhalation:** Move to fresh air.
Skin contact: Brush off excess material and wash skin thoroughly with soap and water.
Eye contact: Flood the eye with plenty of water. If any symptoms persist obtain medical attention.
Oral ingestion: 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:

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.

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:

Avoid generating 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. Pellets 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 pellets will be exposed to air and oxidation resulting in a considerable deterioration of quality. Suitable storage containers are thick gauge laminated foil bags, stainless steel and lacquered mild steel.

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

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|--------------------------------|---|
| <u>Engineering Controls:</u> | Provide adequate ventilation. |
| <u>Eye/Face Protection:</u> | If in danger of generating dust, wear 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: Pelleted powder; various shades of green

Odour: Characteristic, typical hoppy, depends on variety

Odour Threshold: No data available

pH: NA

Melting Point: NA

Boiling Point: NA

Flash Point: NA

Evaporation Rate: NA

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

Solubility in Water: Insoluble

Partition Coefficient: No data available

Auto-ignition 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

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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: | See Section 7.2 |
| 10.5 Incompatible Materials: | None known |
| 10.6 Hazardous Decomposition Products: | None known |

11. TOXICOLOGICAL INFORMATION

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| 11.1 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

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|---|---|
| 12.1 Excotoxicity: | 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 Exposure: And vPvB Assessment: | No data available |
| 12.6 Other adverse effects: Exposure: | No data available |

13. DISPOSAL CONSIDERATIONS

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| 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

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| 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

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|---|-------------------|
| 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