

BarthHaas®

Provoak

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 and Wood Pellets

1.2 Synonyms: PEL/PE 90, 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:**

Hopfenveredlung St. Johann GmbH
Mainburger Str. 15, 93358 St. Johann, Germany
Emergency phone: +49 9444 878 0 (office hours)
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: The product consists of pelletized hop cones (*Humulus lupulus*) and wood powder.

- Dust from hops may be irritating to eyes, mouth and throat
- Wood dust/powder is classified as a carcinogen (H350 - may cause cancer) and it may form combustible dust concentrations in air (H232).

The product itself is not dusty because the components are pelletized. Approximate dust content is *ca.* 0.05% w/w. The dust is sticky due to the presence of hops, and so it is not inherently easily airborne. Therefore, under normal conditions of handling as directed in this safety data sheet, the product is not hazardous because to the low level of potentially respirable dust, i.e. the wood powder is not present in a hazardous form. However, suitable precautions must be taken in the event of handling that will lead to dust formation.

3. COMPONENTS/INFORMATION ON INGREDIENTS

The product consists of powdered wood and milled hop cones of the cultivated hop plant *Humulus lupulus*. Many different varieties.

4. FIRST AID MEASURES

4.1 Description of First Aid Methods:

persist

occur

Inhalation:

Skin contact:

Eye contact:

Oral Ingestion:

Move to fresh air

Brush off excess material and wash skin thoroughly with soap and water.

Flood the eye with plenty of water. If any symptoms

obtain medical attention

Drink large amounts of water to dilute. Vomiting may

but should not be induced. Obtain medical attention if symptoms persist.

4.2 Most Important Symptoms and Effects:

sinusitis

asphyxiation.

cause

Symptoms/injuries after inhalation:

None under normal use. Inhalation of high concentration of dusts may produce nasal dryness, irritation and obstruction. Coughing, wheezing, sneezing, and prolonged colds may also develop. Excess inhalation of dust may cause

See Section 2.3 regarding wood powder.

Symptoms/injuries after skin contact:

None under normal use. In sensitive individuals, may cause skin irritation. Symptoms may include itching.

Symptoms/injuries after eye contact:

Contact may cause mild eye irritation with redness, tearing, and other vision effects. Sensitive individuals may develop contact dermatitis.

Symptoms/injuries after ingestion:

Not a likely route of exposure under anticipated use conditions. If swallowed, may irritation of the gastrointestinal tract and discomfort with symptoms of nausea

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

Do not discharge onto the ground or into watercourses.

Precautions:

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: The product itself is not dusty because the components are pelletized
Approximate dust content is ca. 0.05% w/w. The dust is sticky due to the presence of hops, and so it is not inherently easily airborne. See Section 2.3. Therefore, under normal conditions of handling as directed in this safety data sheet, no control parameters are mandated. In case of dust formation, occupational exposure limits for hardwood dust are 2 mg per m³ within the European Union

8.2 Exposure Controls

<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.

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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	
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	
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	No data available.

Mutagenicity:

11.6 Carcinogenicity: Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. The International Agency for Research on Cancer (IARC) classifies wood dust as a carcinogen to humans (Group 1, as of April 1995). This classification is based primarily on IARC's evaluation of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hemapoietic systems, stomach, colon or rectum with exposure to wood dust. The American Conference of Governmental Industrial Hygienists (ACGIH) classifies hardwood dust as a confirmed human carcinogen (Class A1, as of May 1996).

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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 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

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
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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