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LUPOMAX®

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).

Safety Data Sheet 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. 1600 River Rd., Yakima, WA 98902, USA. Emergency phone: +1 509 469 4000 (office hours) Email: info@johnihaas.com

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2. HAZARD INDENTIFCATION		
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: _ Move to fresh air Inhalation Brush off excess material and wash skin thoroughly with soap and _ **Skin Contact** water. **Eye Contact** Flood the eye with plenty of water. If any symptoms persist obtain _ **Oral Ingestion** medica attention. Drink large amounts of water to dilute. Vomiting may occur but should not be induced. Obtain medical attention if symptoms persist. None known. See Section 2.3. 4.2 Most important symptoms and Effects 4.3 Indications of None known

Immediate Medical





5 FIRE AID MEASURES

5.1 Extinguishing Media	Carbo	on dioxid	e, dry po	owder,	foam. Keep co	ntainer ar	nd surroun	dings cool
	with	water spr	ay. Great	t care sl	hould be taken u	ising wate	r/jet spray	
5.2 Special Hazards	Not l	nown						
Arising from Substance								
		(I.].						
5.3 Advice for	Fire	fighters	should	wear	self-contained	positive	pressure	breathing
Firefighters	appa	ratus						

6. ACCDIENTAL 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	Avoid generating excessive dust. Avoid excessive contact with product
Handling	Use appropriate protective clothing as indicated in Section 8. Wash hands
	after use.
7.2 Conditions for Safe	To guarantee quality avoid heat, moisture and strong odours during storage.
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:

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

Protection





9. PHYSICAL AND CHEMICAL PROPERTIES

a) Physical state	Pelleted powder
b) Color	Various shades of green
c) Odor	Characteristic, typical hoppy, depends on variety
d) Melting point/Freezing point	Not practical to measure
e) Boiling point	Not practical to measure
f) Flammability	Not practical to measure
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	Not practical to measure
value) o) Vapor pressure	Not practical to measure

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p) Density [kg/m³] 450 - 700

q) Relative vapor	Not practical to measure
density	
r) Particle	Not practical to measure
characteristics	

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 None known **Hazardous Reaction 10.4 Conditions to** See Section 7.2 Avoid **10.5 Incompatible** None known Materials **10.6 Hazardous** None known **Decomposition Products**

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 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	No data available





12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity	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:	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	Non-hazardous for transport
14.3 Transport Hazard Class	N/A
14.4 Packing Group	Non-hazardous for transport

14.5 Marine Pollutant No data available

15. REGULATORY INFORMATION

15.1 Safety, Health, and	No data available
Environmental	
Regulations	

15.2 Chemical Safety	No data available
Assessments	





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.