

FLEX®
Safety Data Sheet

1. Identification of the Preparation and of the Company	
1.1 Product Identifier:	FLEX®
Synonyms:	Flowable Hop Bittering Product
1.2 Relevant Uses	For use as an ingredient in the brewing of beer
1.3 Supplier:	Barth-Haas Group / John I. Haas, Inc.
1.4 Emergency Contact Details:	5185 MacArthur Boulevard, N.W., Suite 300, Washington DC, 20016 USA. Emergency phone: +1 202 777 4800 (office hours) Email: info@johnihaas.com
2. Hazards Identification	
2.1 Classification:	Not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
2.2 Label Elements:	N/A (not classified)
2.3 Other Hazards:	This product is a natural product produced from hops for use as an ingredient for the brewing of beer. Ingestion of a large dose may cause irritation of mouth, throat and digestive tract. The product may cause eye irritation and prolonged handling may cause dermatitis.
3. Components/Information on Ingredients	
The product is a mixture of bittering and aroma substances produced from the dried cones of the cultivated hop plant <i>Humulus lupulus</i> .	
CAS: 8060-28-4 EINECS N°. 232-504-3	
4. First Aid Measures	
4.1 Description of First Aid Methods:	<u>Inhalation:</u> Move to fresh air. <u>Skin Contact:</u> 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:	May cause irritation of eyes if in contact with eyes.
4.3 Indication of Immediate Medical Attention or Special Treatment:	None known.

5. Fire-Fighting Measures	
5.1 Extinguishing media:	Carbon dioxide, dry powder and foam.
5.2 Special Hazards Arising from Substance:	Some components of FLEX® are combustible and may give rise to hazardous fumes in a fire.
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:	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:	Avoid excessive contact with product. Use appropriate protective clothing as indicated in Section 8. Wash hands after use.
7.2 Conditions for Safe Storage:	Store at 0 – 5 °C (32 – 41 °F). Suitable storage is high grade stainless steel, glass, high-density polyethylene and high phenolic 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:	<p><u>Engineering Controls:</u> Provide adequate ventilation.</p> <p><u>Eye/Face Protection:</u> Chemical goggles must be worn during handling.</p> <p><u>Hand Protection:</u> PVC, rubber, latex or nitrile gloves.</p> <p><u>Skin Protection:</u> If danger of splashing wear PVC or rubber apron.</p> <p><u>Respiratory Protection:</u> Not normally required.</p>
9. Physical and Chemical Properties	
Appearance:	Viscous liquid, light amber to yellow
Odor:	Characteristic, typical hoppy, resinous aroma
Odor Threshold:	Not measured
pH:	N/A
Boiling Point:	Not measured
Flash Point:	>60 °C
Evaporation Rate:	Not measured
Flammability:	No data available

Upper/Lower Flammability:	No data available
Vapor Pressure:	Not measured
Vapor Density:	Not measured
Density:	800 – 1000 kg.m ⁻³
Solubility in Water:	Insoluble; forms an emulsion
Partition Coefficient:	Not measured
Auto ignition Temperature:	Not measured
Decomposition Temperature:	Not measured
Viscosity at 22 °C:	Typically in the range of 1400 - 1700 mPa-s
Explosive properties:	No data available
Oxidizing 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
10.3 Possibility of Hazardous Reactions:	None known
10.4 Conditions to Avoid:	Keep container closed when not in use
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 Bittering Products are generally recognized as safe (GRAS) for their intended use in accordance with US FDA regulation, 21 CFR 182.20. No TLVs established.
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 Toxicity:	No data available
12.2 Persistence and Degradability:	No data available
12.3 Bio accumulative Potential	No data available
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 Information	
<p>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.</p> <p>Date of issue: 13 January 2014</p>	