

Note

PHA® products are not classified as dangerous products according to European Union legislation, and their use is as flavourings for food, for example 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 Preparation and of the Company

1.1 Product Identifier:	PHA® Generics in PG and HAP Generics in PG
Other Names:	'PHA® Varietals' are PHA® products manufactured from single variety hop oils, and will be named as the hop variety, e.g. 'PHA® Goldings', 'PHA® Saaz', etc. Product code 126354. This MSDS is also suitable for PHA® HAL (product code 126352).
1.2 Relevant Uses	To be used as a flavouring for foods and beverages. Not for direct consumption as an undiluted product.
1.3 Supplier: 1.4 Emergency Contact Details:	BartHaas / BarthHaas UK 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

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:	None			
3. Components/Information on Ingredients				
Contains hop oil fractions in an aqueous propylene glycol carrier.				
Component	Concentration of the component	CAS no.	EINECS no.	Hazard classification of the individual component
Propylene glycol (propan-1,2-diol)	Approx. 42% w/w	57-55-6	200-338-0	Propylene glycol has a workplace exposure limit assigned. It is non-hazardous when used as directed. Propylene glycol is registered as a food additive in the European Union as E 1520.
4. First Aid Measures				
4.1 Description of First Aid Methods:	<p><u>Inhalation</u>: Move the exposed person to fresh air at once. Rinse nose and mouth with water. Obtain medical attention if discomfort continues.</p> <p><u>Skin Contact</u>: Wash skin thoroughly with soap and water.</p> <p><u>Eye Contact</u>: Wash eye with plenty of water. Obtain medical attention if symptoms persist.</p> <p><u>Oral Ingestion</u>: Rinse mouth thoroughly provided person is conscious. Obtain medical attention if discomfort continues.</p>			
4.2 Most Important Symptoms and Effects:	No data available. See Section 11.			
4.3 Indication of Immediate Medical Attention or Special Treatment:	No data available.			
5. Fire-Fighting Measures				
5.1 Extinguishing media:	Carbon dioxide, water spray, dry powder and alcohol-resistant foam.			
5.2 Special Hazards Arising from Substance:	Propylene glycol will give rise to toxic fumes in 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. Wash spillage site with water. Do not contaminate water sources or sewer.
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7. Handling and Storage

7.1 Precautions for Safe Handling:	Avoid spilling, skin and eye contact.
7.2 Conditions for Safe Storage:	Keep container closed when not in use. Keep away from heat and from sources of ignition. Suitable storage is high-grade stainless steel, glass, aluminium or lacquered steel drums. Store at 0-20 °C (32-68 °F).
7.3 Specific End Uses:	The substance is manufactured for use as a food ingredient and for such uses it 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:	<p>Components of the preparation for which there are workplace exposure limits:</p> <ul style="list-style-type: none"> Propylene glycol: UK: Long term exposure limit, measured as 8-hour time weighted average (TWA) (refs.1,3): 150 ppm (474 mg/m³) for total vapour and particulates; 10 mg/m³ for particulates. <p>Propylene glycol is present at ca. 42% w/w (see Section 3).</p>
8.2 Exposure Controls:	<p><u>Engineering Controls:</u> Provide adequate ventilation. Observe the workplace exposure limits and minimize the risk of inhalation of vapours.</p> <p><u>Eye/Face Protection:</u> If danger of splashing wear chemical goggles.</p> <p><u>Hand Protection:</u> Suitable protective gloves if risk of skin contact.</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:	Clear liquid, transparent to pale yellow
Odour:	Characteristic (depending on specific PHA® product)
Odour Threshold:	No data available
pH:	No data available
Freezing Point:	No data available
Boiling Point:	No data available. Data for propylene glycol: >150 °C (302 °F)
Flash Point:	>90 °C (194 °F)
Evaporation Rate:	No data available
Flammability:	No data available. Data for propylene glycol: LEL 2.6%, UEL 12.5%
Upper/Lower Flammability:	No data available
Vapour Pressure:	No data available. Data for propylene glycol: <10 mbar at 20 °C
Vapour Density:	No data available
Density:	1,033 - 1,036 kg/m ³
Solubility in Water:	Soluble
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. Data for propylene glycol: Heat or flame may cause explosions.
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:	Avoid excessive heat for prolonged periods of time.
10.5 Incompatible Materials:	Strong oxidizing substances. Strong acids. Strong bases.
10.6 Hazardous Decomposition Products:	Fire creates carbon monoxide (CO) and carbon dioxide (CO ₂).
11. Toxicological Information	
11.1 Acute Toxicity:	Not known. The product contains propylene glycol at <i>ca.</i> 42% w/w as indicated in Section 3. Propylene glycol is registered as a food additive in the EU as E 1520. Toxicological data for propylene glycol: LD ₅₀ oral rat, mouse 20, 22 g kg ⁻¹ , respectively (1). Propylene glycol may cause local irritation of skin and mucuous membranes (1). Spray and vapour in the eyes may cause irritation and smarting (2).
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:	Not hazardous

12. Ecological Information	
12.1 Toxicity:	No data available. The product contains propylene glycol at ca. 42% w/w as indicated in Section 3. Propylene glycol is not regarded as dangerous for the environment (2). Data for propylene glycol: LC ₅₀ (24 hr) goldfish >5000 mg l ⁻¹ (1); EC ₅₀ (24 and 48 hr) <i>Daphnia magna</i> >10 g l ⁻¹ (1).
12.2 Persistence and Degradability:	No data available. Propylene glycol is biodegradable.
12.3 Bioaccumulative Potential:	No data available. The bioconcentration of propylene glycol has been estimated as <1 (1).
12.4 Mobility in Soil:	No data available. Miscible with water.
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:	Not classified (Regulation (EC) No. 1272/2008) Not classified (Directive 67/548/EEC) The substance is a food ingredient and is therefore not subject to registration via REACH (Regulation (EC) No. 1907/2006).
15.2 Chemical Safety Assessment:	No data available

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.

References: (1) Dictionary of Substances and their Effects (DOSE), 3rd Electronic Edition, 2005 (Royal Society of Chemistry/.Knovel Corp.) (2) Supplier SDS for propylene glycol. (3) EH40/2005 Workplace Exposure Limits, Health and Safety Executive, 2nd Edition 2011.