











Safety Data Sheet

PHA® and HAP products are not classified as dangerous products according to European Union legislation, and they are used 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 SUBSTANCE AND OF THE COMPANY

1.1 Product Identifier

PHA® Classics in PG and HAP Classics in PG

1.2 Synonyms

PHA® Classics and HAP Classics are aroma products that provide a defined aroma characteristic. This safety data sheet is suitable for all of the products listed below:

- HAP F&H Blends (code 126248)
- HAP F/H blend 40/60 (code 126234
- HAP FGC (code 126231)
- HAP FL Extra Linalool (code 126255)
- HAP Floral PG (code 126221)
- HAP Herbal PG (code 126222)
- HAP LAB436 (code 126304)
- PHA® Super Floral PG (code 126704)
- PHA® 432A (code 126238)
- PHA® 443 (code 126239)
- PHA® 449 (code 126242)
- PHA® 476 (code 126356)
- PHA® 482 (code 126302)
- PHA® Balance (code 126626)
- PHA® Citra Classic (126277)
- PHA® Citrussy PG (code 126224)
- PHA® Esters PG (code 126225)
- PHA® Floral 420 (code 126303)
- PHA® Floral PG (code 126256)
- PHA® Herbal PG (code 126257)
- PHA® M (code 126227)
- PHA® Myrcene PG (code 126263)
- PHA® Pomegranate (126353)
- PHA® Rose (126602)
- PHA® Spicy PG (code 126223)
- PHA® Sylvan DP (code 126236)
- PHA® Sylvan PG (code 126226)
- PHA® Zero (various codes)
- PHA Soft Myrcene (code 126715)
- PHA Myrcene US (code 126283)
- PHA Super Citrussy (code 126284)





PHA 3M (code 126362)PHA HITA (code 126363)

1.3 Relevant Uses To be used as a flavouring for foods and beverages. Not for direct consumption as an

undiluted product

1.4 Supplier BarthHaas / BarthHaas UK

1.5 Emergency Contact BarthHaas / BarthHaas UK

Details 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. 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 None

3. COMPONENTS/INFORMATION ON INGREDIENTS

Component	Concentration (% m/m)	CAS no.	EINECS no.	Hazard classification of the individual component
Propylene glycol (propan-1,2-diol)	45 - 99.99	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:

- Inhalation
- Skin Contact
- Eye Contact
- Oral Ingestion
- Move the exposed person to fresh air at once. Rinse nose and mouth with water. Other medical attention if discomfort continues.
- Wash skin thoroughly with soap and water
- Wash eye with plenty of water. Obtain medical attention if symptoms persist.
- Rinse mouth thoroughly provided person is conscious. Obtain medical attention if discomfort continues.

4.2 Most important symptoms and Effects

No data available. See Section 11

4.3 Indications of Immediate Medical No data available

5 FIRE AID MEASURES

5.1 Extinguishing Media Carbon dioxide, water spray, dry powder and alcohol-resistant foam. Do not use full

water jet.

5.2 Special Hazards

Arising from Substance

Propylene glycol will give rise to toxic fumes in fire.

5.3 Advice for Firefighters Firefighters should wear self-contained positive pressure breathing apparatus

6. ACCDIENTAL 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 Contain spillage using earth, sand or other inert material.

Up Transfer to suitable sealed container prior to disposal.

Wash spillage site with water. Do not contaminate water sources or sewer.





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 from food ingredients and it is for use as a processing aid during the manufacture of foodstuffs. It is therefore not subject to registration via REACH (Regulation (EC) No. 1907/2006) for such uses. It should be used in accordance with applicable food legislation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Components of the preparation for which there are workplace exposure limits:

- Propylene glycol: UK: long term exposure limit, measured as 8-hour time weighted average (TWA) (refs.1.3): 150 ppm (474 mg/m 3) for total vapour and particulates; 10 mg/m 3 for particulates.
- Propylene glycol is present at 45 99.99 % w/w (see Section 3)

8.2 Exposure Controls:

- Engineering
 Controls
- Eye/Face Protection
- Hand Protection
- Skin Protection
- Respiratory
 Protection

- Provide adequate ventilation. Observe the workplace exposure limits and minimize the risk of inhalation of vapours.
- If in danger of splashing, wear chemical goggles.
- Suitable protective gloves if risk of skin contact.
- If danger of splashing, wear PVC or rubber apron
- Not normally required





9. PHYSICAL AND CHEMICAL PROPERTIES

a) Physical state Liquid

b) Color Clear, transparent to pale yellow

c) Odor Characteristic (depending on specific PHA®/HAP product)

d) Melting point/Freezing Not practical to measure

point

e) Boiling point No data available. Data for propylene glycol: >150 °C (302 °F)

f) Flammability No data available. Data for propylene glycol: LEL 2.6%, UEL 12.5%

g) Lower and upper No data available. Data for propylene glycol: Heat or flame may cause explosions.

explosion limit

h) Flash point >90 °C (194 °F)

i) Auto-ignition temperature

Not practical to measure

j) Decomposition

temperature

No hazardous decomposition when used for its intended use.

k) pH Not practical to measure

l) Kinematic viscosity Not practical to measure

m) Solubility Soluble

n) Partition coefficient n-Not practical to measure

octanol/water (log value)

o) Vapor pressure

No data available. Data for propylene glycol: <10 mbar at 20 °C





p) Density [kg/m³] 1.010 - 1.060

q) Relative vapor density Not practical to measure

r) Particle characteristics Not practical to measure







10. STABILITY AND REACTIVITY

10.1 Reactivity No reactivity hazards known.

Stable if stored according to Section 7.2 and 10.5 10.2 Chemical Stability

10.3 Possibility of **Hazardous Reaction** 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

Fire creates carbon monoxide (CO) and carbon dioxide (CO₂).

Decomposition Products

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity Not known. The Product contains propylene glycol at 45 - 99.99 % w/w as

indicated in Section 3. Propylene glycol is registered as a food additive in the EU as E

Toxicological data for propylene glycol: LD50 oral rat, mouse 22, 22 g kg⁻¹,

respectively (1)

Propylene glycol may cause local irritation of skin and mucuous memebranes (1).

Spray and vapour in the eyes may cause irritation and smarting (2).

11.2 Skin

No data available

Corrosion/Irritation

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

No data available

Exposure

11.9 STOT-Repeated

No data available

Exposure

11.10 Aspiration Hazard Not hazardous

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity No data available.

The product contains propylene glycol at 45 – 95.99 % w/w as indicated in Section 3. Propylene glycol is not regarded as dangerous for the environment (2). Data for

propylene

glycol: LC50 (24hr) goldfish >5000 mg l-1 (1); EC50 (24 and 48 hr) Daphnia magna >

10 g l-1 (1)

12.2 Persistence and

Degradability

No data available. Propylene glycol is biodegradable.

12.3 Bioaccumulative

No data available. The bioconcentration of propylene glycol has been estimated as <1

Potential

(1).

12.4 Mobility in Soil No data available. Miscible with water.

12.5 Results of PBT

Exposure:

No data available

12.6 Other Adverse Effects

No data available

Exposure





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 Class Non-hazardous for transport

14.3 Shipping name N/A

14.4 Packing Group Non-hazardous for transport

14.5 Marine pollutant: Not data available

15. REGULATORY INFORMATION

15.1 Safety, Health, and Not classified (Regulation (EC) No. 1272/2008)

Environmental The substance is a food ingredient and its therefore not subject to registration via

Regulations REACH (Regulation (EC) No. 1907/2006).

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 ist 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. General references for Pbackground: supplier SDS for grapefruit oil and for lactic acid.