

SAFETY DATA SHEET

According to Regulation (EC) 1907/2006 as retained in GB CLP

SECTION 1 Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier:

Product Name	Alpha acetolactate decarboxylase
CAS No.	Not applicable
EC No.	Not applicable
REACH Registration No.	Not applicable

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Identified Use(s)	Brewing enzyme
Uses Advised Against	None identified

1.3 Details of the Supplier of the Safety Data Sheet:

Company Identification	Lallemand UK Ltd
Address of Manufacturer	AB Vickers, Dallow Street, Burton on Trent
Postal code	DE14 2PQ
Telephone:	+44 (0)1283563268
E-mail	abvickers@lallemand.com (only checked during office hours)
Office hours	09:00 to 17:00, Monday to Friday, UK

1.4 Emergency Telephone Number:

++44 (0)1283563268 (office hours only as above)

SECTION 2 Hazards Identification

2.1 Classification of the substance or mixture:

2.1.1 Classification: According to Regulation (EC) No. 1272/2008 (CLP).
Resp. Sens. 1 (H334)

2.2 Label elements

Labelling according to regulation (EC) No.1272/2008 (CLP)

Hazard Pictograms:



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Signal Word: Danger

Hazard Statements: H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements

P261: Avoid breathing vapours.

P284: Wear respiratory protection

P304 + P340: IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P501: Dispose of contents/container in accordance with local, state or national legislation

2.3 Other hazards

Not known

2.4 Additional Information

For full text of H/ P phrases see Section 16.

SECTION 3. Composition / Information on Ingredients

3.2 Mixtures:

This mixture contains substances presenting a health or environmental hazard within the meaning of Regulation (EC) No. 1272/2008, and assigned a Community Workplace Exposure Limit (WEL), classified as PBT/vPvB or included in the Candidate List. See Section 8 for OELs.

Hazardous ingredients	CAS No	EC No	CLP Classification	w/w%
Acetolactate decarboxylase	9025-02-9	618-520-7	Resp. Sens. 1 (H334)	1-50%

SECTION 4 First Aid Measures

4.1 Description of first aid measures

Inhalation: In case of exposure to vapours, remove victim from exposure. Administer artificial respiration if breathing has stopped. Call for immediate medical attention.

Skin Contact: There may be irritation and redness of the local area of contact. Drench the affected skin with running water and wash off with water. Call for medical attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical attention.

Ingestion: Rinse mouth thoroughly with water. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell..

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulties. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting Measures

5.1 Extinguishing media:

Suitable extinguishing media: alcohol-resistant foam, fire extinguishing powder or water spray.

Unsuitable extinguishing media: None identified.

5.2 Special hazards arising from the substance or mixture:

None identified

5.3 Advice for fire-fighters:

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Avoid generation of aerosols. Ensure adequate ventilation.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Method and materials for containment and cleaning up:

Contain or absorb spillage with inert material.

Place absorbents in suitable containers for disposal according to local regulations.

6.4 Reference to other sections:

See also Section 8 and Section 13.

SECTION 7 Handling and Storage

7.1 Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Protect from light. Keep/store only in original container.

7.3 Specific end use(s)

Brewing enzyme

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SECTION 8 Exposure Controls / Personal Protection

8.1 Control parameters:

Occupational Exposure Limit (EH40/2005)						
Substance	CAS #	LTEL (8 Hr. TWA ppm)	LTEL (8 Hr. TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Amylase	9025-02-9					No data available

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Ensure that eyewash stations and safety showers are close to the workstation location. Transfer via enclosed lines. Carefully handle the substance to minimise release. Avoid producing aerosols

8.2.2 Personal protection equipment:

8.2.2.1 Eyes and face protection: Safety goggles with side protection or full face visor, (EN166).

8.2.2.2 Skin protection: Hands protection: During processing chemical resistant gloves should be worn, (EN374-2).

8.2.2.3 Respiratory protection: If ventilation is insufficient, suitable respiratory protection must be provided (mask with P3 filter).

8.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SECTION 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance:	Liquid
Colour:	brown
Odour:	typical fermentation odour
Viscosity:	No data available
Density:	typical 1.07 @ 20°C
Solids Content:	No data available
Flash Point:	No data available
Initial Boiling Point and Boiling Range:	No data available
Solubility in Water:	soluble in water
Vapour Pressure:	No data available
Vapour Density:	No data available
Auto Ignition Temperature:	No data available
Evaporation Rate:	No data available
Decomposition Temperature:	No data available
Explosive Properties:	No data available
Upper/Lower Flammability or Explosive Limits:	No data available

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Oxidising Properties:

No data available

pH:

Typical 6 -7

9.2 Other Information

None.

SECTION 10 Stability and Reactivity

10.1 Reactivity:

None anticipated

10.2 Chemical stability:

Stable under normal conditions

10.3 Possibility of hazardous reactions:

No hazardous reactions are known

10.4 Conditions to avoid:

No data available

10.5 Incompatible materials:

No data available.

10.6 Hazardous decomposition products

No data available

SECTION 11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Not classified.
Acute toxicity - Skin Contact	Not classified.
Acute toxicity - Inhalation	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified.
Skin sensitization data	Not classified.
Respiratory sensitization data	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	Not classified
STOT - repeated exposure	Not classified.
Aspiration hazard	Not classified.

11.2 Other information

Inhalation: May cause sensitisation

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Skin Contact: There may be mild irritation
Eye Contact: There may be mild irritation
Ingestion: No data available

SECTION 12 Ecological Information

- 12.1 Toxicity:**
- | | |
|------------------------------------|-----------------|
| Toxicity - Aquatic invertebrates | Not classified |
| Toxicity - Fish | Not classified |
| Toxicity - Algae | Not classified |
| Toxicity - Sediment Compartment | Not classified. |
| Toxicity - Terrestrial Compartment | Not classified. |
- 12.2. Persistence and degradability**
Not known
- 12.3. Bio-accumulative potential**
Not known.
- 12.4. Mobility in soil**
Not known
- 12.5. Results of PBT and vPvB Assessment**
Not known
- 12.6. Other adverse effects**
Not known

SECTION 13 Disposal Considerations

- 13.1. Waste treatment methods**
Dispose of wastes in an approved waste disposal facility. Dispose of contents/containers in accordance with local regulations.
- 13.2 Additional information**
Disposal should be in accordance with local, state or national legislation.

SECTION 14 Transport Information

- 14.1 UN number**
UN No. N/A
- 14.2 UN proper shipping name**

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UN proper shipping name	N/A
14.3 Transport hazard class	
ADR/RID Class	N/A
IMDG Class	N/A
IMDG EMS	N/A
ICAO/IATA	
Excepted Quantities	N/A
Passenger and Cargo Aircraft Limited Quantities	N/A
Packing Instructions	
Passenger and Cargo Aircraft Limited Quantities	N/A
Max net Qty	
Passenger and Cargo Aircraft Packing	N/A
Instructions	
Passenger and Cargo Aircraft Max net Qty	N/A
Cargo Aircraft Packing Instructions	N/A
Cargo Aircraft Max net Qty	N/A
IATA Special Provisions	N/A
ADR Classification Code	N/A
ADR HIN	N/A
ADR Transport Category	N/A
Tunnel Restriction Code	N/A
Emergency Action Code	N/A
14.4 Packing group	
Packing group	N/A
Labels	
Special Provisions	N/A
Limited Quantities	N/A
Excepted Quantities	N/A
Mixed Packing Instructions for Packages	N/A
Special Packing Provisions for Packages	N/A
Mixed Packing Instructions for Packages	N/A
14.5 Environmental hazards	
Environmental hazards	None
14.6 Special precautions for user	
None	
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	
Packing Instructions for Portable Tanks	N/A
Special Provisions for Portable Tanks	N/A
Tank Code for Tanks	N/A
Special Provisions for Tanks	N/A
Vehicle for Tank Carriage	N/A
Special Provisions for Carriage - Packages	N/A
Special Provisions for Carriage - Bulk	N/A

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Special Provisions for Carriage - Loading, Unloading and Handling	N/A
Special Provisions for Carriage - Operation	N/A

SECTION 15 Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	None
Community Rolling Action Plan (CoRAP)	Not listed

This Safety Data Sheet was prepared in accordance with EC Regulation (EC) No. 1907/2006 as retained in GB CLP. The product has been classified in accordance with Regulation (EC) No. 1272/2008 (CLP).

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this mixture by the supplier.

SECTION 16 Other Information

LEGEND

Hazard Pictograms:



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Hazard Statements:

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements

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Abbreviations:

CAS: Chemical Abstracts Service;
EINECS: European Inventory of Existing Commercial Chemical Substances
PBT: Persistent, Bioaccumulative and Toxic.
vPvB: Very Persistent and Very Bioaccumulative.

References:

Supplier's Safety Data Sheets for ingredients
ECHA REACH dossiers
Approved Classification and Labelling Guide
Regulation (EC) No. 1272/2008 of the European Parliament and of the council.

Version history:

Version:	8
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Sections changed from previous version:	15

Disclaimer

The information in this safety data sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. No responsibility or liability, expressed or implied, can be accepted for any problems which may arise as a result of any actions or decisions that may be taken by the user, or by any other party that may be involved with specifying or using the material.