

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: ALPHA ACETOLACTATE DECARBOXYLASE

Product code: ALDC

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

Use of substance / mixture: Beverage Processing Aids and Other Usages

1.3. Details of the supplier of the safety data sheet

Company name: Murphy and Son Ltd
Murphy & Son Ltd
Alpine St, Old Basford
Nottingham
NG6 0HQ
United Kingdom

Tel: (+44) 115 978 5494

Email: technical@murphyandson.co.uk

1.4. Emergency telephone number

Emergency tel: (+44) 115 978 5494
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Resp. Sens. 1: H334

Most important adverse effects: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Label elements:

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

Hazard pictograms: GHS08: Health hazard



Signal words: Danger

Precautionary statements: P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P284: In case of inadequate ventilation wear respiratory protection.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for

SAFETY DATA SHEET

ALPHA ACETOLACTATE DECARBOXYLASE

Page: 2

breathing.

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

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ACETOLACTATEDECARBOXYLASE

EINECS	CAS	PBT / WEL	CLP Classification	Percent
-	9025-02-9	-	Resp. Sens. 1: H334	1-10%

Non-classified ingredients:

GLYCEROL

EINECS	CAS	PBT / WEL	CLP Classification	Percent
200-289-5	56-81-5	-	-	50-70%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. If inflammation develops, receive medical attention.

Eye contact: Bathe the eye with running water for 15 minutes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Obtain medical attention if pain, blinking, tears or redness persist.

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

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact. Sensitization possible by skin contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat. There may be shortness of breath due to congestion of the lungs.

Inhalation: Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath.

Delayed / immediate effects: Delayed effects can be expected after long-term exposure.

[cont...]

SAFETY DATA SHEET
ALPHA ACETOLACTATE DECARBOXYLASE

Page: 3

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers. Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear protective clothing to prevent contact with skin and eyes. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Notify the police and fire brigade immediately. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Soak up spilled material with inert absorptive material such as granular clay or sawdust.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is exhaust ventilation of the area. Avoid the formation or spread of mists in the air. Avoid contact with skin, eyes and clothing. Do not breathe dust or fumes Handle in accordance with good industrial hygiene and safety practice.

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SAFETY DATA SHEET

ALPHA ACETOLACTATE DECARBOXYLASE

Page: 4

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Keep away from direct sunlight. Keep only in the original container.

7.3. Specific end use(s)

Specific end use(s): Beverage Processing Aids and Other Usages

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	30mg/m ³	-	-

DNEL/PNEC Values

ALPHA ACETOLACTATE DECARBOXYLASE

Type	Exposure	Value	Population	Effect
DNEL	-	60ng/m ³	Workers	Local

8.2. Exposure controls

Engineering measures: Ensure there is exhaust ventilation of the area.

Respiratory protection: In case of inadequate ventilation or risk of inhalation of dust use suitable respiratory equipment. Particle filter class P3S (EN143).

Hand protection: EN420: Minimum requirements for efficiency level 1 of all groups. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Nitrile gloves. Butyl gloves. PVC gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Pale brown

Odour: Barely perceptible odour

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: Soluble

Viscosity: No data available.

Boiling point/range°C: No data available.

Flammability limits %: lower: Not applicable.

Melting point/range°C: No data available.

upper: Not applicable.

Flash point°C: No data available.

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SAFETY DATA SHEET

ALPHA ACETOLACTATE DECARBOXYLASE

Page: 5

Part.coeff. n-octanol/water: Log Pow<0

Autoflammability°C: No data available.

Vapour pressure: No data available.

Relative density: 1.15

pH: 5.2-5.4

VOC g/l: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	MUS	LD50	>10000	mg/kg
ORAL	RAT	LD50	12600	mg/kg

Relevant hazards for product:

Hazard	Route	Basis
Respiratory/skin sensitisation	INH	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact. Sensitization possible by skin contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat. There may be shortness of breath due to congestion of the lungs.

[cont...]

SAFETY DATA SHEET

ALPHA ACETOLACTATE DECARBOXYLASE

Page: 6

Inhalation: Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath.

Delayed / immediate effects: Delayed effects can be expected after long-term exposure.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
Daphnia magna	48H EC50	>500	mg/l

12.2. Persistence and degradability

Persistence and degradability: Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Dispose in a safe manner in accordance with local/national regulations.

Disposal of packaging: Spillage and packaging should be disposed of in a manner approved of by the Local Authority.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

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SAFETY DATA SHEET

ALPHA ACETOLACTATE DECARBOXYLASE

Page: 7

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Legend to abbreviations: PNEC = predicted no effect concentration

DNEL = derived no effect level

LD50 = median lethal dose

LC50 = median lethal concentration

LDLO = lethal dose low

EC50 = median effective concentration

IC50 = median inhibitory concentration

dw = dry weight

bw = body weight

cc = closed cup

oc = open cup

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

IPR = intraperitoneal

SCU = subcutaneous

ORL = oral

SKN = skin

DRM = dermal

OCC = ocular/corneal

OPT = optical

ING = ingestion

INH = inhalation

PCP = physico-chemical properties

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.