

Safety Data Sheet

DECARBOXYLASE 2000

Revision Date: 13/08/2019 **Status:** Approved

Hazard Statement: Danger – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Classified as Hazardous according to criteria of Safe Work Australia.



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Decarboxylase 2000	
Chemical Name	Alpha-acetolactate decarboxylase	
Product Code	254227/ 262176	
Recommended Use	Brewing	
Supplier Name	Connell Bros Company Australasia Pty Ltd	ABN: 53 079 159 327
Address	26 Research Drive Croydon South Vic Australia 3136	
Emergency Telephone Numbers	+61 3 9761 7999	+61 417 537 063 (24 hours)
Other Names	Name	Product Code
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Other Information		

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS

Hazard Statements:	Hazard Category 1, Sensitisation - Respiratory Danger – H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Prevention Statements:	P261 Avoid breathing dust/fume/gas/mist/ vapours/spray. P264 Wash hands thoroughly after handling P284 In case of inadequate ventilation wear respiratory protection. P280 Wear protective gloves/protective clothing/eye protection/face protection. P270 Do not eat, drink or smoke when using this product. Avoid ingesting material P272 Contaminated work clothing should not be allowed out of the workplace.
Human Health Hazards:	Inhalation of enzyme aerosols or dust may induce sensitisation and may cause allergic type reactions in sensitised individuals. Prolonged skin contact may cause irritation. Direct contact with eyes may cause irritation and may be harmful if swallowed.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

<u>Ingredients Name</u>	<u>IUB No.</u>	<u>CAS No.</u>	<u>Hazard Classification</u>	<u>Proportion of Ingredients</u>
Alpha-acetolactate decarboxylase	4.1.1.5	9025-02-9	1 Respiratory Sensitivity	Proprietary
Other components deemed not to be hazardous by Safe Work Australia				

4. FIRST AID MEASURES

Response Statement Inhalation: P304+P340, P342+P311	IF INHALED: May cause allergic respiratory reaction. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms contact a doctor/physician.
Response Statement Ingestion:	IF SWALLOWED: Rinse mouth with water. Contact a doctor/physician if you feel unwell.
Response Statement Skin:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Response Statement Eyes:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First Aid Facilities:	Access to potable water. Wash bottles or eye wash station or showers.
Advice to Doctor:	Treat symptomatically Treat asthma in the normal way and remove patient from further exposure to enzyme dust until symptoms are controlled. Advise workplace of the need to control dust exposure. Patient may require high level of respiratory protection if a trial return to same work is attempted. Treat allergic contact dermatitis in the normal way and remove patient from further exposure until control is achieved. Advise workplace of need to control worker exposure. Advise worker on need for high level of skin care if trial of return to same work is attempted.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Water, foam, halones
Special hazards arising from the substance or mixture:	May cause sensitisation by inhalation of dust or aerosols.
Advice for firefighters:	As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency equipment:	Use only with adequate protective equipment and emergency procedures. Avoid breathing dust or spray mist. Avoid formation of aerosols and dust. For personal protection see Section 8.
Environmental precautions:	Contain spill. Keep out of waterways.
Methods and materials for containment and cleaning up:	Use appropriate personal protection (see Section 8 of SDS). Provide for sufficient ventilation. Avoid contact with product. Contain and remove spilled product by mechanical means or with a vacuum cleaner equipped with a high efficiency filter. Avoid generation of aerosols with high pressure sprays. Wash with plenty of water.
Reference to other sections:	Refer to Section 8 of SDS.

7. HANDLING AND STORAGE

Precautions for safe handling:	Use only with adequate protective equipment and emergency procedures. Avoid breathing dust or spray mist. Avoid formation of aerosols and dust. Ventilate areas. Use appropriate personal protection (see Section 8 of SDS). Handle in accordance with good industrial hygiene and safety practice
Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry cool and well ventilated place. Protect from light. Store in original container.
Specific end use(s):	See Section 1 of SDS for more information.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameter Exposure Limits (according to Safe Work Australia)

Ingredient Name	STEL (mg/m ³)	STEL (ppm)	TWA (mg/m ³)	TWA (ppm)
Alpha-acetolactate decarboxylase	N/D	N/D	N/D	N/D

Exposure Controls

Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.
Engineering measures:	Good local ventilation.
Personal protective equipment - Respiratory Protection	Wear suitable respiratory protective devices (for use against dusts & mists) if potential for inhalation occurs. P3 filters are recommended
Personal protective equipment - Eye and Face Protection	Safety glasses with side shields, goggles or face shield.
Personal protective equipment - Skin, Hand and Body Protection	Wear protective gloves and clothing.
Environmental Exposure Controls:	Avoid release to the environment

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown liquid
Odour:	Typical fermentation odour
Odour Threshold:	Not applicable
pH:	No data available
Melting Point/Freezing Point:	Not applicable
Boiling Point:	100 °C
Flash Point:	Not applicable
Evaporation Rate	Not applicable
Flammability	Not Flammable
Explosive Limits:	No data available
Vapour Pressure:	13mm @ 20 °C
Vapour Density:	Not applicable
Relative Density/Specific Gravity: (H₂O=1)	Not applicable
Solubility in Water:	Completely miscible
Partition coefficient	Not applicable
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Reactivity:	Stable under recommended transport and storage conditions
Chemical Stability:	Stable under normal conditions of use and storage
Possibility of Hazardous Reactions:	None under normal processing
Conditions to Avoid:	Avoid dust formation or generation of aerosols
Incompatible Materials:	None know
Hazardous Decomposition Products:	None know

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity -:

Oral	Not expected to be toxic by ingestion.
Dermal	There is no data available for this product.
Inhalation	There is no data available for this product.
Irritation -:	
Skin	May cause slight irritation.
Eye	May cause slight irritation.
Respiratory	May cause slight irritation.

Other effects

Systemic toxicity:	There is no data available for this product.
Sensitization:	Inhalation of enzyme mist/dust may cause allergic respiratory reactions, including asthma, in susceptible individuals on repeated exposure.
Mutagenic effects:	There is no data available for this product.
Carcinogenicity:	There is no data available for this product.
Reproductive effects:	This product does not contain any known or suspected reproductive hazards.
Developmental toxicity:	Not expected to produce reproductive or developmental toxicity.

12. ECOLOGICAL INFORMATION

Toxicity:	Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.
Persistence and degradability:	Enzymes are considered readily biodegradable.
Bioaccumulative potential:	Bioaccumulation is unlikely.
Mobility in soil:	Soluble
Other adverse effects:	None known

13. DISPOSAL CONSIDERATIONS

Disposal Methods:	Liquid spills should be flushed with water to approved sewer (avoid high pressure rinsing). Vacuum or moisten any dried spills with water and collect into closed impermeable disposal containers. Do not use cleaning methods that generate dust or aerosol. P501 Dispose of closed containers of absorbed material into landfill in accordance with national or local regulations.
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14. TRANSPORT INFORMATION

UN-Number	Not regulated. Not regulated as per IATA
UN proper shipping name	Not regulated
Transport hazard class(es)	Not regulated. Not classified as Dangerous or Hazardous for transport, including air.
Packing group	Not regulated. Store in closed container to prevent aerosol and dust formation.
Environmental hazards	Not regulated
Special precautions for users	Not regulated. Normal Good Manufacturing Practice for handling and storage.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not regulated
Dangerous goods	Not dangerous goods in the meaning of ADG Code
Additional Information	Harmonized Tariff Code: 3507.90.7000 (for enzymes)

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. OTHER INFORMATION

Abbreviations used:	TWA Time Weighted Average - airborne concentration over an eight hour working day, for a five day working week over an entire working life. According to current knowledge this concentration should neither impair the health or, not cause undue discomfort to, nearly all workers. STEL Short Term Exposure Limit - average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health nor cause undue discomfort to nearly all workers. ADG Australian Dangerous Goods.	
Contact Person/Point:	Technical Information Officer +61 3 9761 7999 or +61 417 537 063 (24 hours).	
Issue Date: Initially Authorised By:	May 11, 2018 Tom Mascara	
Current Version Authorised By:	02/13-08-19 Tom Mascara	Revised By: Tom Mascara
Revisions:	01/11-05-18 02/13-08-19	

References:

Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals, Safe Work Australia, December 2011
<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/safety-data-sheets-hazardous-chemicals-cop>

Globally Harmonized System of Classification and Labelling of Chemicals (GHS), United Nations.
http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html

Hazardous Substance Information System (HSIS) Safe Work Australia
http://www.hsis.safeworkaustralia.gov.au/ExposureStandards/Search?CasNo=&Name=subtilisin&TwaPpm=&TwaMgm3=&StelPpm=&StelMgm3=&Category=&Notices=&Reference=&Notes=&fromDate=&toDate=&Sort=Cas_No&underReview=B&results=20&isAdvancedSearch=false

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