



SAFETY DATA SHEET

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Product name: Alcolase™ 146
Product code: 6385-01
Description: Glucoamylase
Product use: Saccharifying enzyme for use in fuel ethanol production
Supplier name and address: Lallemand Biofuels & Distilled Spirits
 6120 West Douglas Avenue
 Milwaukee, WI 53218
Information telephone: 1 (414) 393-0410
Emergency telephone: Contact your local doctor or hospital

SECTION 2- HAZARD IDENTIFICATION

Classification: **Classification according to Regulation (EC) 1272/2008 (CLP)**
 Hazard class: Respiratory sensitizer
 Hazard category: 1
 Hazard statement: H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Classification according to Directives 67/5481 EEC and 1999/45/EC (including amendments)
 Sensitizing, R42
Signal Word: Danger



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

Precautionary Statements: P261 – Avoid Breathing vapors or sprays
 P284 – Wear respiratory protection
 P304 and P340 – IF INHALED: Remove person to fresh air
 P342 and P311 – If experiencing symptoms seek medical attention

Other Information: Repeated inhalation of enzyme aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Mild skin irritation and mild eye irritation are possible.

SECTION 3– DATA ON COMPONENTS

Ingredients	CAS #	% by Wt	EC Classification	EINECS	CLP Classification
Glucoamylase	9032-08-0	Confidential	3.3.1.3	232-877-2	Resp.Sens 1;H334



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SECTION 4– FIRST AID MEASURES (If any symptoms persist, seek medical attention)

Emergency and First aid procedures

Eye contact:	Flush eyes for at least 15-20 minutes. Remove contact lenses. Seek medical attention immediately
Skin contact:	Wash affected area with soap and water. Seek medical attention or advice if irritation persists
Inhalation:	Immediately remove person to fresh air. If allergic respiratory reaction or signs of toxicity occurs seek medical attention.
Ingestion:	In the event of swallowing, if the quantity is small (no more than one mouthful) rinse the mouth with water and consult a doctor if symptoms persist.

Most important symptoms and effects both acute and delayed.

Irritation of the eyes: with long term contact. Irritation of the skin: In sensitive individuals. Allergic reaction: in case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms. Respiratory distress: delayed effects from exposure can be expected. In certain cases symptoms may only appear after several hours.

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically. If seeking medical attention provide SDS document to physician.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing media:	Use appropriate medium for underlying cause of fire
Protective equipment:	Wear protective clothing and self-contained breathing apparatus
Hazardous combustion products:	Oxides of carbon and oxides of nitrogen
Firefighting:	Avoid breathing fumes. Dispose of contaminated extinction water according to applicable regulations
Special exposure procedures:	Avoid inhalation of combustion products

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, equipment and procedures:	Wear protective equipment. Avoid contact with skin and eyes. Contain the leaks or spills with non-combustible absorbent material such as sand, or diatomaceous earth.
Environmental precautions:	Use absorbent material to soak up the spill
Method and materials for containment and cleaning up:	Contain and control spills with absorbent material, scoop into suitable container for disposal according to local, federal and state regulations.

SECTION 7– HANDLING & STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Wear protective equipment. Wash thoroughly after handling. Avoid handling if allergic to enzymes.
Storage:	Store below 68° F for maximum stability. Keep out of direct sunlight

SECTION 8– EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:	Occupational exposure limits not determined
Engineering Controls:	Emergency eye wash fountains or safety showers should be available in the immediate vicinity of use/handling. Ensure good ventilation
Skin Protection:	Wear latex or other impervious gloves
Eye Protection:	Safety glasses with side shields or goggles
Respiratory Protection:	An approved NIOSH respirator should be worn when exposures are expected to be high.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Clear brown liquid
Odor:	Slight fermentation odor.
Density:	1.05 - 1.30 kg/L
pH:	3.5 - 5.5
Melting point/Freezing point:	Not determined
Oxidizing properties:	No
Solubility in water:	Soluble



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SECTION 10– STABILITY AND REACTIVITY

Reactivity:	Stable under normal conditions of use and storage
Incompatibility:	Avoid contact with oxidizing agents, strong alkalis and strong acids.
Conditions to avoid:	High temperatures
Hazardous reactions:	No dangerous reactions are known.
Hazardous decomposition products:	Thermal decomposition products may include oxides of carbon and oxides of nitrogen

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicological information

Toxicity data:	LD ₅₀ : > 2000mg/kg oral rat
Local effects:	May cause eye and skin irritation
Sensitization:	Possible allergic sensitization (see Section 2).
Acute toxicity levels:	Not determined
Health effects delayed:	In certain cases respiratory distress may only appear after an extended period of time/several hours

SECTION 12 ECOLOGICAL INFORMATION

Toxicity to fish:	LC50 >39.5 mg/l (96hr)
Toxicity to daphnia:	EC50 >39.5 mg/l (48hr)
Persistence and degradability:	Readily biodegradable

SECTION 13– DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with Federal, State/Provincial and local regulations

SECTION 14 – TRANSPORT INFORMATION

Transportation by road (DOT/TDG): not a regulated product
 Transportation by sea (International Maritime Code for Dangerous Goods): not a regulated product
 Transportation by air (International Air Transport Association): not a regulated product

SECTION 15 – REGULATORY INFORMATION

TSCA (Toxic Substances Control Act): Substance not listed
 California Proposition 65: Substance not listed
 NIOSH-Ca (National Institute for Occupational Safety and Health): Substance not listed

SECTION XVI – OTHER INFORMATION

SDS Date of Preparation: December 2019. Reviewed February 2021

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