

MATERIAL SAFETY DATA SHEET

MALTODEXTRIN

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product name	Maltodextrin	Company	#3208, Building III, College of Agriculture and Life Sciences 99, Daehak-ro Yuseong-gu Daejeon, 34134, South Korea.
Product use	For laboratory research use only.	Tel	+82-42-821-8936(8932)
		Fax	+82-821-8777
		Website	www.carboexpert.com

2. HAZARDS IDENTIFICATION

GHS Classification No data available.

Pictogram No data available.

Signal word No data available.

Hazard statements(s) No data available.

Precautionary statement(s)

No data available.

Hazards not otherwise classified(HNOC) or not covered by GHS

No data available.

3. COPPOSITION AND INFORMATION ON INGREDIENTS

CAS No 9050-36-6

Oral LD 50 -

Demal LD 50 -

Inhalation LD 50 -

Molecular weight

4. FIRST AID MEASURES

General information

General information: Immediately remove any clothing contaminated by the product. Move out of dangerous area. If symptoms persist, call a physician.

Skin contact

Immediately flush skin with running water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing before reuse. Obtain medical aid immediately.

Eye contact

Immediately flush open eyes with running water for at least 15 minutes. Obtain medical aid immediately.

Ingestion

Do NOT induce vomiting without medical advice. Rinse mouth with water. Never administer anything by mouth to an unconscious person. Obtain medical aid immediately.

Inhalation

Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical aid.

Most important symptoms and effects, both acute and delayed

Symptoms No data available.

Indication of any immediate medical attention and special treatment needed

Note to physicians No data available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, dry chemical, carbon dioxide, or chemical foam.

Specific hazards arising from the chemical

Carbon oxides.

Precautions for firefighters

As in any fire, wear a MSHA/NIOSH-approved or equivalent, pressure-demand, self-contained breathing apparatus and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective equipment and keep unprotected personnel away. Ensure adequate ventilation. Remove all sources of ignition. Prevent further leak or spill if safe to do so.

Environmental precautions

Do not let product enter drains, other waterways, or soil.

Methods and materials for containment and cleaning up

Prevent further leak or spill if safe to do so. Vacuum, sweep up, or absorb with inert material and place into a suitable disposal container. Consult local regulations for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Safety glasses. Lab coat. Dust respirator. Use a dust respirator if ventilation is inadequate or handling of material creates visible dust clouds, and airborne concentrations exceed the recommended exposure limits. Be sure to use an approved/certified respirator or equivalent.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	White powder
Odor	No data available
Molecular Formula	$C_{18}H_{32}O_{16}$
pH	No data available.
Boiling Point Range	865.2°C
Freezing/Melting Point	244.1°C
Flash Point	477°C
Evaporation Rate	No data available.
Upper Flammability	No data available.
Lower Flammability	No data available.
Vapor Pressure	No data available.

Vapor Density	No data available.
Solubility	No data available.
Relative Density	1.81
Refractive Index	1.67
Explosive properties	No data available.
Oxidizing properties	No data available.
Partition coefficient	No data available.

10. STABILIT AND REACTIVITY

Reactivity	No data available.
Chemical stability	Stable under recommended temperatures and pressures.
Possibility of hazardous reactions	No data available.
Conditions to avoid	Dust generation.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides

11. TOXICOLOGICAL INFORMATION

RTECS#	No data available.
Acute toxicity	No data available.
Routes of exposure	Inhalation, eye contact, skin contact, ingestion.
Symptoms related to the physical, chemical and toxicological characteristics	Skin contact may result in inflammation characterized by itching, scaling, reddening, blistering, pain or dryness. Eye contact may result in redness, pain or severe eye damage. Inhalation may cause irritation of the lungs and respiratory system. Overexposure may result in serious illness or death.
Carcinogenicity	
IARC	Not classified.

NTP Not listed.

OSHA Not listed

Acute toxic effects

Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data available.

BOD5 and COD No data available.

Products of Biodegradation

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation

The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation

No data available.

13. DISPOSAL CONSIDERATIONS.

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. TRANSPROT INFORMATION.

DOT Classification Not applicable.

Identification Not applicable.

Transport hazard class(es)

Not applicable.

Packing group Not applicable.

15. REGULATORY INFORMATION

TSCA Chemical Inventory

This product is on the EPA Toxic Substance Control Act (TSCA) inventory. The product is supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720 et seq. The health risks have not been fully determined. Any information that is or becomes available will be supplied on an SDS sheet.

Other Regulations

EINECS This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 232-940-4).

Canada Listed on Canadian Domestic Substance List (DSL).

China	Listed on National Inventory.
Japan	Listed on National Inventory (ENCS).
Korea	Listed on National Inventory (KECI).
Philippines	Listed on National Inventory (PICCS).
Australia	Listed on AICS.

16. ADDITIONAL INFORMATION.

Revision note No data available.

Disclaimer

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End of Material Safety Data Sheet