

MATERIAL SAFETY DATA SHEET

MALTOTETRAOSE

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product name	Maltotetraose	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
		Fax	+82-821-8777
		Website	www.carboexpert.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008

Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008

Other hazards

None

3. COPPOSITION AND INFORMATION ON INGREDIENTS

CAS No	34612-38-9
Synonyms	Maltotetraose
Fomula	$C_{24}H_{42}O_{21}$
Molecualr weight	666.58 g / mol
EC-NO.	252-111-0

4. FIRST AID MEASURES

Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling

Indication of any immediate medical attention and special treatment needed

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

Avoid dust formation. Avoid breathing vapours, mist or gas.

For personal protection see section 8

Environmental precautions

Do not let product enter drains

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

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
pH	No data available.
Melting point/ freezing point	169.5 - 173 °C
Initial boiling point and boiling range	No data available.
Flash Point	No data available.
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.
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.

Reactivity No data available.

Possibility of hazardous reactions
No data available.

Conditions to avoid Dust generation.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

RTECS# No data available.

Acute toxicity No data available.

Routes of exposure Inhalation, eye contact, skin contact, ingestion.

Carcinogenicity
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Specific target organ toxicity
No data available

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.

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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