

MSDS Number: **M0806** * * * * * *Effective Date: 12/19/05* * * * * * *Supersedes: 05/14/03*



From: Mallinckrodt Baker, Inc.
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Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtree: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

MANNITOL

1. Product Identification

Synonyms: Manna Sugar; Mannite; Mannitol,d- ; 1,2,3,4,5,6-Hexanehexol

CAS No.: 69-65-8

Molecular Weight: 182.17

Chemical Formula: C₆H₁₄O₆

Product Codes:

J.T. Baker: 2553, 2554, 2555

Mallinckrodt: 6208, 6209, 6212, 7781

2. Composition/Information on Ingredients

| Ingredient | CAS No | Percent |
|------------|---------|-----------|
| Hazardous | | |
| ----- | ----- | ----- |
| ----- | | |
| D-Mannitol | 69-65-8 | 90 - 100% |
| Yes | | |

3. Hazards Identification

Emergency Overview

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 0 - None

Flammability Rating: 2 - Moderate

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:

Large quantities of inhaled material could cause irritation of the upper respiratory tract. A tickling cough is a common symptom.

Ingestion:

May cause gastric irritation, nausea and diarrhea. Large doses produce vomiting, chills, dizziness, chest pain, heart failure and pulmonary edema.

Skin Contact:

May cause irritation and discoloration of sensitive skin areas.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact:

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:

Wash thoroughly with running water. Get medical advice if irritation develops.

5. Fire Fighting Measures

Fire:

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Mannitol: Flash Point: > 149C (300F)

Minimum dust cloud ignition temperature: 460C (860F)

Explosion:

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Mannitol: Minimum explosible concentration = 0.065 g/l

Maximum explosion pressure: 97 lb/sq. in.

Fire Extinguishing Media:

Water spray, carbon dioxide, or dry powder.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Pressure from the extinguishing media may cause severe dusting.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White powder.

Odor:

Odorless.

Solubility:

1 gram/5.5 ml of water.

Relative Density:

1.52

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

290 - 295C (554 - 563F)

Melting Point:

ca. 167C (ca. 333F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Mannitol: Oral rat LD50: 13,500 mg/kg. Investigated as a tumorigen and mutagen.

| Ingredient Category | ---NTP Carcinogen--- | | IARC |
|------------------------|----------------------|-------------|------|
| | Known | Anticipated | |
| D-Mannitol (69-65-8) | No | No | None |

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

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-----\Chemical Inventory Status - Part 1\-----
--
Ingredient                TSCA  EC   Japan
Australia
-----
-
D-Mannitol (69-65-8)      Yes   Yes  Yes   Yes
```

```
-----\Chemical Inventory Status - Part 2\-----
--
Ingredient                Korea  --Canada--
                        DSL    NDSL   Phil.
-----
D-Mannitol (69-65-8)      Yes   Yes   No    Yes
```

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-----\Federal, State & International Regulations - Part 1\-----
--
                        -SARA 302-   -----SARA 313-----
--
Ingredient                RQ     TPQ     List  Chemical
Catg.
-----
-
D-Mannitol (69-65-8)      No     No      No     No
```

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-----\Federal, State & International Regulations - Part 2\-----
--
Ingredient                CERCLA  -RCRA-  -TSCA-
                        261.33  8 (d)
-----
D-Mannitol (69-65-8)      No      No      No
```

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: No Chronic: No Fire: Yes Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **1** Flammability: **1** Reactivity: **0**

Label Hazard Warning:

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.

Label Precautions:

Store in a tightly closed container.

Avoid dust cloud in presence of an ignition source.

Maintain adequate ventilation.

Label First Aid:

Not applicable.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:

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