Mannitol

J.T. BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

Product Name: Mannitol
Common Synonyms: Manna Sugar; 1,2,3,4,5,6-Hexahexol; Mannite
Chemical Family: Carbohydrates and Polysaccharides
Formula: HOCH₂(CHOH)₄CH₂OH

Formula Wt.: 182.17
CAS No.: 69-65-8
NIOSH/RTECS No.: OP2060000
Product Use: Laboratory Reagent
Product Codes: 2554

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* System

HEALTH FLAMMABILITY REACTIVITY CONTACT

NONE MODERATE SLIGHT NONE

Laboratory Protective Equipment

U.S. Precautionary Labeling

WARNING!

COMBUSTIBLE.
Keep away from heat, sparks, flame. Keep in tightly closed container. Wash thoroughly after handling. In case of fire, soak with water. In case of spill, sweep up and remove. Flush spill area with water.
Mannitol

Effective: 03/09/92

M0806-03

Precautionary Labeling (Continued)

International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.

SNF-T-DATA* Storage Color Code: Red (flammable)

Section II - Components

Component: Mannitol

CAS No.: 69-65-8

Weight %: 90-100

OSHA/PEL: N/E

ACGIH/TLV: N/E

Section III - Physical Data

Boiling Point: N/A

Vapor Pressure (mmHg): N/A

Melting Point: 167°C (332°F) (at 760 mm Hg)

Vapor Density (air=1): N/A

Specific Gravity: 1.50 (H₂O=1)

Evaporation Rate: N/A

Solubility(H₂O): Appreciable (>10%)

% Volatiles by Volume: 0 (21°C)

pH: N/A

Physical State: Solid

Odor Threshold (ppm): N/A

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: White crystalline powder.

Continued on Page: 3
M0806-03
Effective: 03/09/92

Mannitol

Section IV - Fire and Explosion Hazard Data

Flash Point (Closed Cup): N/A
Autoignition Temperature: N/A
Flammable Limits: Upper - N/A, Lower - N/A

Fire Extinguishing Media
Use water spray, carbon dioxide, dry chemical or ordinary foam.

Special Fire-Fighting Procedures
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards
None identified.

Toxic Gases Produced
Carbon monoxide, carbon dioxide

Explosion Data-Sensitivity to Mechanical Impact
None identified.

Explosion Data-Sensitivity to Static Discharge
None identified.

Section V - Health Hazard Data

Threshold Limit Value (TLU/TWA): Not Established
Short-Term Exposure Limit (STEL): Not Established
Permissible Exposure Limit (PEL): Not Established

Toxicity of Components
Oral Rat LD₅₀ for Mannitol 17 g/kg
Intraperitoneal Mouse LD₅₀ for Mannitol 14 g/kg
Oral Mouse LD₅₀ for Mannitol 22 g/kg

Continued on Page: 4
MANNITOL

Effective: 03/09/92  
Issued: 07/10/93

SECTION V - HEALTH HAZARD DATA (CONTINUED)

Carcinogenicity:  NTP: No  IARC: No  Z List: No  OSHA Reg: No

Carcinogenicity
None identified.

Reproductive Effects
None identified.

Effects of Overexposure

INHALATION:  none identified
SKIN CONTACT: none identified
EYE CONTACT: none identified
SKIN ABSORPTION: none identified
INGESTION: none identified
CHRONIC EFFECTS: none identified

Target Organs
eyes

Medical Conditions Generally Aggravated by Exposure
none identified

Primary Routes of Entry
eye contact

Emergency and First Aid Procedures

INGESTION:  If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

INHALATION: CALL A PHYSICIAN. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT: In case of contact, flush skin with water.

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.
M0806-03
Effective: 03/09/92

Mannitol

SECTION V - HEALTH HAZARD DATA (CONTINUED)

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: Yes Pressure: No Reactivity: No

Extremely Hazardous Substance: No CERCLA Hazardous Substance: No SARA 313 Toxic Chemicals: No TSCA Inventory: Yes

SECTION VI - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: heat, flame, other sources of ignition

Incompatibles: strong oxidizing agents

Decomposition Products: carbon monoxide, carbon dioxide

SECTION VII - SPILL & DISPOSAL PROCEDURES

Steps to be Taken in the Event of a Spill or Discharge

Wear suitable protective clothing. Shut off ignition sources; no flares, smoking, or flames in area. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

Disposal Procedure

Dispose in accordance with all applicable federal, state, and local environmental regulations.

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

Ventilation:

Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.

Respiratory Protection: None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.

Continued on Page: 6
SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT (CONTINUED)

Eye/Skin Protection: Safety goggles, proper gloves are recommended.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SNF-T-DATA* Storage Color Code: Red (flammable)

Storage Requirements
Keep container tightly closed. Store in cool, dry, well-ventilated area away from heat, sparks, or flame.

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

International (I.M.O.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
Marine Pollutants: No

AIR (I.C.A.O.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

U.S. Customs Harmonization Number: 290543000001

N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and
face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are 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-JTBAKER) for assistance.

COPYRIGHT 1993 J.T. BAKER INC.
* TRADEMARKS OF J.T. BAKER INC.

Approved by Quality Assurance Department.