



# SAFETY DATA SHEET

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: D-Maltose, Monohydrate, Crystalline

PRODUCT NUMBER: M588

COMPANY INFO: *PhytoTechnology Laboratories*®  
PO Box 12205, Shawnee, KS 66282-2205  
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EMERGENCY PHONE NUMBER 1-800-535-5053 - US Only  
(INFOTRAC): 1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *PhytoTechnology Laboratories*® are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture:

Not a hazardous substance or mixture.

### GHS Label elements, including hazard and precautionary statements:

Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS: - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 4-O- $\alpha$ -D-Glucopyranosyl-D-glucose

CAS No: 6363-53-7

Formula: C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>•H<sub>2</sub>O

Molecular Weight: 360.32 g/mol

EC No.: 200-716-5

| Ingredient             | CAS Number | Percent | Hazardous                                       |
|------------------------|------------|---------|---|
| D-Maltose, Monohydrate | 6363-53-7  | >96 %   | No exposure limits established by OSHA or ACGIH |

## 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### Route of Entry

### Symptoms

### First Aid Procedures

Ingestion

May cause irritation if swallowed

If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. **Get medical attention.**

Inhalation

May cause irritation to respiratory tract

Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. **Get medical attention.**

|              |   |  |
|--------------|---|--|
| Eye Contact  | Direct contact may cause irritation. May cause redness, tearing, or blurred vision. | Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b> |
| Skin Contact | Irritating. May cause reddening, itching or inflammation.                           | Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>  |

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

## 5. FIRE FIGHTING MEASURES

|   |   |
|---|---|
| Suitable Extinguishing Media:                                 | Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.                                       |
| Special Protective Equipment and Precaution for Firefighters: | In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance. |
| Hazardous Combustion Products:                                | May emit toxic fumes under fire conditions.   |

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

|                                    |  |
|------------------------------------|--|
| Environmental Precautions:         | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.   |
| Method of Containment and Cleanup: | Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains. |

## 7. HANDLING AND STORAGE

|                                  |   |
|----------------------------------|---|
| Precaution for Safe Handling:    | Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Provide adequate ventilation at places where dust is formed. Wash thoroughly after use. |
| Conditions for Safe Storage:     | Keep in a tightly closed container and store in a cool, dry, and well-ventilated area.  |
| Incompatibilities:               | Strong oxidizing agent  |
| Recommended Storage Temperature: | Room Temperature  |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

|  |   |
|--|---|
| OSHA's Permissible Exposure Limits (PELs): | None  |
| Threshold Limit Values (TLVs):             | None  |
| Engineering Controls:                      | Handle in accordance to general industrial hygiene and safety practice.   |
| Personal Protective Equipment (PPE):       |   |
| Eye/Face Protection:                       | Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.  |
| Skin Protection:                           | Protective gloves   |
| Body Protection:                           | Lab coat  |
| Respiratory Protection:                    | Respiratory protection is not required.<br>Use N95 (US) or type P1 (EN 143) dust mask where dust level is nuisance.<br>A NIOSH/MSHA approved air purifying respirator is recommended where airborne |

concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|  |                               |                               |
|--|-------------------------------|-------------------------------|
| Appearance:                              | White to off-white powder     |                               |
| pH (10.00 g/L):                          | 4.5 – 6.5                     |                               |
| Solubility:                              | Soluble in water              |                               |
| Melting Range:                           | 119 – 121 °C (246 – 250 °F)   |                               |
| Vapor Density:                           | No data available             |                               |
| Vapor Pressure:                          | No data available             |                               |
| Specific Gravity:                        | No data available             |                               |
| Odor:                                    | Odorless                      |                               |
| Odor Threshold:                          | No data available             |                               |
| Viscosity:                               | No data available             |                               |
| Relative Density:                        | No data available             |                               |
| Evaporation Rate:                        | No data available             |                               |
| Initial Boiling Point and Boiling Range: | No data available             |                               |
| Flammability (solid, gas):               | No data available             |                               |
| Partition coefficient: n-octanol/water): | No data available             |                               |
| Auto-ignition Temperature:               | No data available             |                               |
| Decomposition Temperature:               | No data available             |                               |
| Flash Point (Closed Cup):                | No data available             |                               |
| Flammable Limits:                        | Upper (%) – No data available | Lower (%) – No data available |

## 10. STABILITY AND REACTIVITY

|                                   |                                       |  |
|-----------------------------------|---------------------------------------|--|
| Reactivity:                       | No data available                     |  |
| Chemical Stability:               | Stable under normal conditions of use |  |
| Possibility of Hazard Reactions:  | No data available                     |  |
| Conditions to Avoid:              | Moisture                              |  |
| Incompatibles Materials:          | Strong oxidizing agents               |  |
| Hazardous Decomposition Products: | Carbon dioxide, carbon monoxide       |  |

## 11. TOXICOLOGICAL INFORMATION

|                                 |                                    |                   |
|---------------------------------|------------------------------------|-------------------|
| Toxicity:                       | LD <sub>50</sub> (Oral-Rat)(mg/Kg) | No data available |
|                                 | LD <sub>50</sub> (IV-Mouse)(mg/Kg) | No data available |
|                                 | LD <sub>50</sub> (IP-Mouse)(mg/Kg) | No data available |
| Carcinogenicity:                | NTP:                               | No                |
|                                 | IARC:                              | No                |
|                                 | OSHA Reg:                          | No                |
| Reproductive Toxicity:          | No data available                  |                   |
| Specific Target Organ Toxicity: | Single Exposure:                   | No data available |
|                                 | Repeated Exposure:                 | No data available |

Target Organs: No data available  
Routes of Entry: Inhalation and ingestion  
NIOSH/RTECS NO: No data available

*The toxicological properties of this product have not been thoroughly investigated*

**12. ECOLOGICAL INFORMATION**

Ecotoxicity: No data available  
Persistence and Degradability: No data available  
Bioaccumulative Potential: No data available  
Mobility in Soil: No data available  
Other Adverse Effects: No data available

**13. DISPOSAL CONSIDERATION**

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

**14. TRANSPORT INFORMATION**

Domestic (D.O.T.): Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

Hazard Class: N/A

Reportable Quantity: N/A

UN/NA: N/A

Labels: N/A

International:

IMDG: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

Hazard Class: N/A

UN/NA: N/A

Labels: N/A

IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

Hazard Class: N/A

UN/NA: N/A

Labels: N/A

**15. REGULATORY INFORMATION**

**TSCA:** No

**SARA TITLE III:**

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: No SARA Hazards

**Massachusetts Right to Know Components:** This product is not on the Massachusetts Substance List (MSL).

**Pennsylvania Right to Know Components:** This product is not listed on the Pennsylvania Code’s Hazardous Substance List (Chapter 323).

**New Jersey Right to Know Components:** This product is not listed amongst the New Jersey Right to Know Hazardous Substance Fact Sheets

**California Prop. 65 Components:** This product is not known to the State of California to cause cancer or reproductive toxicity.

**16. OTHER INFORMATION**

|                     |                      |                     |                        |                            |
|---------------------|----------------------|---------------------|------------------------|----------------------------|
| <b>HMIS Rating:</b> | <b>Health Hazard</b> | <b>Flammability</b> | <b>Physical Hazard</b> | <b>Personal Protection</b> |
|                     | 0                    | 0                   | 0                      | B                          |
| <b>NFPA Rating:</b> | <b>Health Hazard</b> | <b>Fire Hazard</b>  | <b>Instability</b>     | <b>Special Hazard</b>      |
|                     | 0                    | 0                   | 0                      |                            |

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