



## MSDS - Dextrose Monohydrate

May 27, 2009

### Section 1. Product Information

Product Name: Dextrose Monohydrate Food Grade, Solid

Chemical Name: d-Glucose

Synonyms: Cerelose Dextrose, 020010 (2001); Grape Sugar; Dextrose

Chemical Family: Sugar

Molecular Formula: C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>

Product Use: Food additive

CAS #: 50-99-7

WHMIS Classification: Not regulated

Distributed By: Pestell Minerals & Ingredients, New Hamburg, ON Canada

**24 Hour Emergency Telephone (Canutec): 613-996-6666**

### Section 2. Hazardous Ingredients

Non Hazardous according to Controlled Products Regulation

Dextrose 99-100% concentration

### Section 3. Physical Data

Physical State	Solid
Appearance & Odour	Odourless, white powder
Odour Threshold	Not applicable
Boiling Range °C	Not applicable
Melting/Freezing Point	Not available
Vapour Pressure (mm Hg @ 20°C)	Not applicable
Vapour Density (air=1.0)	Not applicable
Relative Density (g/cc)	1.60
Bulk Density	Not applicable
Viscosity	Not applicable
Evaporation Rate:	Not applicable
Solubility	Soluble in water
% Volatile by Volume	8.5%
pH	Not available
Coefficient of water/oil Distribution:	Not available
Volatile Organic Compounds:	Not applicable

## Section 4. Fire and Explosion Data

Flammability Class:	Not regulated
Flash Point:	Non-combustible. Burns vigorously with intense heat.
Auto Ignition Temperature:	Not applicable
Flammability Limits in Air:	LEL: Not Applicable                      UEL: Not applicable
Hazardous Combustion Products:	Thermal decomposition products are toxic and may include oxides of carbon
Unusual Fire/Explosion Hazards:	Avoid accumulation and dispersion of dust to reduce explosion potential. Sweep up immediately to eliminate slipping hazard.
Sensitivity to Mechanical Impact:	Not expected to be sensitive to mechanical impact
Rate of Burning:	Not available
Explosive Power:	Not available
Sensitivity to Static Discharge:	Not expected to be sensitive to static discharge
Extinguishing Media:	Dry chemical, carbon dioxide or water spray
Fire Fighting Instructions: Use water spray to cool fire-exposed containers or structures. Use water spray to disperse vapours. Use self contained breathing apparatus and special protective clothing. Avoid accumulation and dispersion of dust to reduce explosion potential.	
Fire Fighting Protective Equipment: Use self contained breathing apparatus and protective clothing.	

## Section 5. Reactivity Data

Chemical Stability: Stable

Under Fire Conditions: Not readily flammable but will support combustion. In common with many organic chemicals in powder form this product may be capable of forming flammable dust clouds in air.

Hazardous Polymerization: Will not occur

Conditions to Avoid: High temperatures, sparks, open flames and all other sources of ignition. Avoid accumulation and dispersion of dust to reduce explosion potential. Minimize air borne spreading of dust. Sweep up immediately to eliminate slipping hazard.

Materials to Avoid: Strong oxidizers. Lewis or mineral acids. Isocyanates. Materials reactive with hydroxyl bearing compounds.

Decomposition or Combustion Products: Thermal decomposition products are toxic and may include oxides of carbon.

**Exposure Limit:** PNOC

ACGIH: 10 mg/m<sup>3</sup> - inhalable particulate

3 mg/m<sup>3</sup> - respirable particulate

OSHA: 50 mppcf\* or 15 mg/m<sup>3</sup> - total dust

15 mppcf\* or 5 mg/m<sup>3</sup> - respirable fraction

\* mppcf = million particles per cubic foot

## Section 6. Toxicological Properties

### Routes of Entry

**Inhalation:** Product may be mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing. Excessive contact with powder may cause drying of mucous membranes of nose and throat due to absorption of moisture and oils.

**Skin Contact:** Excessive contact with powder may cause drying of the skin due to absorption of moisture and oils.

**Skin Absorption:** Not likely to be absorbed through the skin

**Eye Contact:** This product may cause mild, transient irritation. Excessive contact with powder may cause drying of

mucous membranes of the eyes due to absorption of moisture and oils.

**Ingestion:** Ingestion of large amounts may cause nausea, gastrointestinal upset and abdominal pain. Ingestion of very high levels may cause hyperglycemias.

**Other Health Effects:** Effects (irritancy) on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential.

Hyperglycemias is defined as abnormally high concentration of glucose in the circulating blood.

**Carcinogenicity:** Ingredients of this product is not classified as carcinogenic by ACGIH, OSHA, NTP

**Reproductive Data:** No adverse reproductive effects are anticipated

**Mutagenicity:** No adverse effects anticipated

**Teratogenicity:** No adverse effects anticipated

**Respiratory/Skin Sensitization:** None known

**Synergistic Materials:** None known

**Ecotoxicity:** Not available. The product does not bio-accumulate in aquatic or terrestrial food chain.

**Environmental Fate:** Not available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds or rivers.

## Section 7. Preventive Measures

Recommendations listed in this section indicate the type of equipment which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will indicate the need for specific protective devices at your workplace.

### Engineering Controls

General exhaust is acceptable. Local exhaust is acceptable. Local exhaust ventilation preferred. Ventilation should be explosion proof. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Avoid accumulation and dispersion of dust to reduce explosion potential. Ventilate low lying areas such as sumps or pits where dense dust may collect.

### Personal Protection Equipment

**Eye Protection:** Safety glasses with side shields are recommended to prevent eye contact. Use chemical safety goggles when there is potential for eye contact.

**Skin Protection:** Gloves and protective clothing made from plastic, canvas or rubber. Discard contaminated gloves.

**Respiratory Protection:** No specific guidelines available. A NIOSH/MSHA approved dust mask for concentrations of nuisance dust up to 100 mg/m<sup>3</sup> particulate. An air supplied respirator if concentrations are higher or unknown

**Other Personal Protective Equipment:** Wear regular work clothing. The use of coveralls is recommended. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

**Waste Disposal Method:** This information applies to the material as manufactured. Processing, use or contamination may make the information inappropriate, inaccurate or incomplete. The responsibility for proper waste disposal lies with the owner of the waste. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Re-evaluation of the product may be required by the user at the time of disposal since the product uses, transformations, mixtures and processes may influence waste classification.

Empty containers retain product residue. Treat package in the same manner as the product.

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases which change from region to region.

**Containment and Clean-up Procedures:** In all cases of leak or spill contact vendor at Emergency Number shown on the front page of this MSDS. Wear respirator, protective clothing and gloves. Avoid dry sweeping. Do not use compressed air to clean surfaces. Vacuuming or wet sweeping is preferred. Return all material possible to container for proper disposal. Minimize air borne spreading of dust.

### Handling and Storage

**Handling Practices:** Use normal "good" industrial hygiene and housekeeping practices. Minimize air borne spreading

of dust. Sweep up immediately to eliminate slipping hazard.

Other Precautions: Use only with adequate ventilation and avoid breathing dusts. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

### Storage

Ventilation Requirements: General exhaust is acceptable

Store in a cool, well ventilated area. Avoid moisture contamination. Prolonged storage may result in lumping or caking.

Packaging and Containers: Confirm suitability of any material before using.

## Section 8. First Aid Measures

**Inhalation:** If respiratory problems arise, move the victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical advice IMMEDIATELY.

**Skin Contact:** Start flushing while removing contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation, redness or a burning sensation develops and persists obtain medical advice.

**Eye Contact:** Immediately flush eyes thoroughly for 5 minutes with running water. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention.

**Ingestion:** Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. DO NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus. Rinse mouth and administer more water. Obtain medical attention IMMEDIATELY.

**Not to Physician:** Treat symptomatically.

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