

# Safety Data Sheet

## Lactose, Monohydrate



### Section 1 Product Description

**Product Name:** Lactose, Monohydrate  
**Recommended Use:** Science education applications  
**Synonyms:** Milk Sugar  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

**Other Safety Precautions:** Not a dangerous substance according to GHS classification criteria.  
No known OSHA hazards.

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Lactose, Monohydrate	5989-81-1	100

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use dry chemical, CO2 or appropriate foam.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** None Known  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

### Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** No adverse health affects expected from the clean-up of spilled material.  
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

### Section 7 Handling and Storage

**Handling:** Keep container tightly closed in a cool, well-ventilated place. Avoid contact with skin and eyes.  
**Storage:** N/A  
**Storage Code:** Green - general chemical storage

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## Section 8

## Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
No data available	N/A	N/A	N/A	N/A

### Control Parameters

#### Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

No respiratory protection required under normal conditions of use.

#### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

No information available

## Section 9

## Physical Data

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

**Molecular Weight:** 360.3

**Appearance:** White to slightly yellow Powder

**Odor:** None

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** No data available 218 C

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammable Limits in Air:** N/A

**Vapor Pressure:** N/A

**Evaporation Rate (BuAc=1):** N/A

**Vapor Density (Air=1):** N/A

**Specific Gravity:** N/A

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** No data available

**Percent Volatile by Volume:** N/A

## Section 10

## Reactivity Data

#### Reactivity:

Not generally reactive under normal conditions.

#### Chemical Stability:

Stable under normal conditions.

#### Conditions to Avoid:

None known.

#### Hazardous Polymerization:

Will not occur

## Section 11

## Toxicity Data

**Symptoms (Acute):** No data available

**Delayed Effects:** No data available

### Acute Toxicity:

#### Chemical Name

Lactose, Monohydrate

#### CAS Number

5989-81-1

#### Oral LD50

Oral LD50 Rat >  
10000 mg/kg

#### Dermal LD50

Not determined

#### Inhalation LC50

Not determined

### Carcinogenicity:

#### Chemical Name

Lactose, Monohydrate

#### CAS Number

5989-81-1

#### IARC

Not listed

#### NTP

Not listed

#### OSHA

Not listed

### Chronic Effects:

#### Mutagenicity:

No evidence of a mutagenic effect.

#### Teratogenicity:

No evidence of a teratogenic effect (birth defect).

#### Sensitization:

No evidence of a sensitization effect.

#### Reproductive:

No evidence of negative reproductive effects.

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**Target Organ Effects:**

**Acute:** No data available  
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

<b>Chemical Name</b>	<b>CAS Number</b>	<b>Eco Toxicity</b>
Lactose, Monohydrate	5989-81-1	

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** This material is not considered to be a RCRA hazardous waste.

## Section 14 Transport Information

<b>Ground - DOT Proper Shipping Name:</b> Not regulated for transportation by DOT	<b>Air - IATA Proper Shipping Name:</b> Not regulated for air transport by IATA.
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## Section 15 Regulatory Information

**TSCA Status:** A component (or components) of this product is not listed on the TSCA Inventory of Existing Chemical Substances. Product is for research and development use only.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Lactose, Monohydrate	5989-81-1	No	No	No	No	No

## Section 16 Additional Information

**Revised: 09/09/2015**                      **Replaces: 08/20/2015**                      **Printed: 10-29-2015**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

**Glossary**

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health