

## SAFETY DATA SHEET

Creation Date 29-Jul-2009

Revision Date 11-Apr-2018

Revision Number 4

### 1. Identification

**Product Name** Lactose monohydrate

**Cat No. :** L5-500; L6-212; L6-200LB; L6-500; L8-12; L8-212; XXL6100GM;  
NC1639429

**Synonyms** Lactin; Lactobiose; Milk Sugar

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

**Classification**

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Label Elements**

None required

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|-----------|--------|----------|
|-----------|--------|----------|

|                      |            |     |
|----------------------|------------|-----|
| Lactose, monohydrate | 64044-51-5 | 100 |
|----------------------|------------|-----|

#### 4. First-aid measures

|  |  |
|--|--|
| <b>Eye Contact</b>                         | Rinse skin with water. Get medical attention if symptoms occur.  |
| <b>Skin Contact</b>                        | Rinse skin with water. Get medical attention if symptoms occur.  |
| <b>Inhalation</b>                          | Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration. |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Get medical attention.   |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

#### 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | No information available  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | No information available  |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | No data available   |
| <b>Lower</b>                            | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

#### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 0             | 0                   | 0                  | N/A                     |

#### 6. Accidental release measures

|   |   |
|---|---|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. |
| <b>Environmental Precautions</b>            | Avoid release to the environment. See Section 12 for additional Ecological Information.           |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Avoid dust formation.                  |

#### 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin and eyes. Avoid ingestion and inhalation. |
|-----------------|--|

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |   |
|---|---|
| <b>Physical State</b>                         | Solid   |
| <b>Appearance</b>                             | White   |
| <b>Odor</b>                                   | Odorless  |
| <b>Odor Threshold</b>                         | No information available  |
| <b>pH</b>                                     | No information available  |
| <b>Melting Point/Range</b>                    | 219 °C / 426.2 °F   |
| <b>Boiling Point/Range</b>                    | No information available  |
| <b>Flash Point</b>                            | No information available  |
| <b>Evaporation Rate</b>                       | negligible  |
| <b>Flammability (solid,gas)</b>               | No information available  |
| <b>Flammability or explosive limits</b>       |   |
| <b>Upper</b>                                  | No data available   |
| <b>Lower</b>                                  | No data available   |
| <b>Vapor Pressure</b>                         | negligible  |
| <b>Vapor Density</b>                          | No information available  |
| <b>Specific Gravity</b>                       | 1.525   |
| <b>Solubility</b>                             | Soluble in water  |
| <b>Partition coefficient; n-octanol/water</b> | No data available   |
| <b>Autoignition Temperature</b>               | No information available  |
| <b>Decomposition Temperature</b>              | No information available  |
| <b>Viscosity</b>                              | No information available  |
| <b>Molecular Formula</b>                      | C <sub>12</sub> H <sub>22</sub> O <sub>11</sub> .H <sub>2</sub> O |
| <b>Molecular Weight</b>                       | 360.32  |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Avoid dust formation. Excess heat. Incompatible products.

|   |   |
|---|---|
| <b>Incompatible Materials</b>           | Strong oxidizing agents                                 |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ) |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                |
| <b>Hazardous Reactions</b>              | None under normal processing.                           |

## 11. Toxicological information

### Acute Toxicity

|                    |   |
|--------------------|---|
| <b>Oral LD50</b>   | Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. |
| <b>Dermal LD50</b> | Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. |
| <b>Mist LC50</b>   | Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.     |

### **Component Information**

|   |                          |
|---|--------------------------|
| <b>Toxicologically Synergistic Products</b> | No information available |
|---|--------------------------|

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                        |  |
|------------------------|--|
| <b>Irritation</b>      | No information available   |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component            | CAS-No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------------|------------|------------|------------|------------|------------|------------|
| Lactose, monohydrate | 64044-51-5 | Not listed |

|                          |                          |
|--------------------------|--------------------------|
| <b>Mutagenic Effects</b> | No information available |
|--------------------------|--------------------------|

|                             |                           |
|-----------------------------|---------------------------|
| <b>Reproductive Effects</b> | No information available. |
|-----------------------------|---------------------------|

|                              |                           |
|------------------------------|---------------------------|
| <b>Developmental Effects</b> | No information available. |
|------------------------------|---------------------------|

|                       |                           |
|-----------------------|---------------------------|
| <b>Teratogenicity</b> | No information available. |
|-----------------------|---------------------------|

|                                 |            |
|---------------------------------|------------|
| <b>STOT - single exposure</b>   | None known |
| <b>STOT - repeated exposure</b> | None known |

|                          |                          |
|--------------------------|--------------------------|
| <b>Aspiration hazard</b> | No information available |
|--------------------------|--------------------------|

|   |                          |
|---|--------------------------|
| <b>Symptoms / effects, both acute and delayed</b> | No information available |
|---|--------------------------|

|  |                          |
|--|--------------------------|
| <b>Endocrine Disruptor Information</b> | No information available |
|--|--------------------------|

|                              |  |
|------------------------------|--|
| <b>Other Adverse Effects</b> | The toxicological properties have not been fully investigated. |
|------------------------------|--|

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Persistence and Degradability</b> | No information available |
|--------------------------------------|--------------------------|

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Bioaccumulation/ Accumulation</b> | No information available. |
|--------------------------------------|---------------------------|

|                 |                           |
|-----------------|---------------------------|
| <b>Mobility</b> | No information available. |
|-----------------|---------------------------|

## 13. Disposal considerations

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

### 15. Regulatory information

**United States of America Inventory**

| Component            | CAS-No     | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|----------------------|------------|------|---|-----------------------------|
| Lactose, monohydrate | 64044-51-5 | -    | -   | -                           |

**Legend:**

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export      Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component            | CAS-No     | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|----------------------|------------|-----|------|--------|-------|------|------|-------|------|
| Lactose, monohydrate | 64044-51-5 | -   | -    | -      | X     | -    | X    | X     | -    |

**U.S. Federal Regulations**

**SARA 313**      Not applicable

**SARA 311/312 Hazard Categories**      See section 2 for more information

**CWA (Clean Water Act)**      Not applicable

**Clean Air Act**      Not applicable

**OSHA - Occupational Safety and Health Administration**      Not applicable

**CERCLA**      Not applicable

**California Proposition 65**      This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**      Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ):      N

DOT Marine Pollutant      N

DOT Severe Marine Pollutant      N

**U.S. Department of Homeland Security**      This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**16. Other information**

**Prepared By** Regulatory Affairs  
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**Disclaimer**

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**End of SDS**