SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name: Sucrose
Product Number: S0389
Brand: Sigma
CAS-No.: 57-50-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet
Company: Sigma-Aldrich Inc.
            3050 SPRUCE ST
            ST. LOUIS MO  63103
            UNITED STATES
Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone
Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Combustible dust,
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements
Pictogram: none
Signal Word: Warning
Hazard statement(s): May form combustible dust concentrations in air.
Precautionary: none
2.3 **Hazards not otherwise classified (HNOC) or not covered by GHS**
Combustible dust
May form explosible dust-air mixture if dispersed.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

<table>
<thead>
<tr>
<th>Formula</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>C_{12}H_{22}O_{11}</td>
<td></td>
<td></td>
</tr>
<tr>
<td>342.30 g/mol</td>
<td>57-50-1</td>
<td></td>
</tr>
<tr>
<td>200-334-9</td>
<td>Saccharose</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

**If inhaled**
After inhalation: fresh air.

**In case of skin contact**
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

**In case of eye contact**
After eye contact: rinse out with plenty of water. Remove contact lenses.

**If swallowed**
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media**
Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Risk of dust explosion.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Dry.

Storage class
Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saccharose</td>
<td>57-50-1</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Remarks: Not classifiable as a human carcinogen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>15 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>10 mg/m³</td>
<td>California permissible exposure limits for chemical contaminants (Title 8, Article 107)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>California permissible exposure limits for chemical contaminants (Title 8, Article 107)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Appropriate engineering controls**
Change contaminated clothing. Wash hands after working with substance.

**Personal protective equipment**

**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

**Respiratory protection**
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

9.1 **Information on basic physical and chemical properties**

- **a)** Appearance Form: crystalline
  Color: white
- **b)** Odor No data available
- **c)** Odor Threshold No data available
- **d)** pH 5.5 - 7.5 at 342 g/l at 25 °C (77 °F)
- **e)** Melting point/freezing point Melting point/range: 185 - 187 °C (365 - 369 °F)
- **f)** Initial boiling point and boiling range 697.11 °C 1286.80 °F at 1,013.3 hPa
- **g)** Flash point () Not applicable
- **h)** Evaporation rate No data available
- **i)** Flammability (solid, gas) May form combustible dust concentrations in air.
- **j)** Upper/lower flammability or explosive limits No data available
- **k)** Vapor pressure No data available
- **l)** Vapor density No data available
- **m)** Density 1.59 g/cm3 at 25 °C (77 °F)
  Relative density No data available
- **n)** Water solubility 342 g/l at 20 °C (68 °F) - completely soluble
o) Partition coefficient: log Pow: -3.277 - Bioaccumulation is not expected.
   n-octanol/water

p) Autoignition temperature
   No data available

q) Decomposition temperature
   160 - 165 °C (320 - 329 °F) -

r) Viscosity
   No data available

s) Explosive properties
   No data available

t) Oxidizing properties
   none

### 9.2 Other safety information
No data available

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**10.2 Chemical stability**
The product is chemically stable under standard ambient conditions (room temperature).

**10.3 Possibility of hazardous reactions**
Violent reactions possible with:
- Strong oxidizing agents

**10.4 Conditions to avoid**
No information available

**10.5 Incompatible materials**
No data available

**10.6 Hazardous decomposition products**
In the event of fire: see section 5

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**
- LD50 Oral - Rat - 29,700 mg/kg
- Cyanosis
- Diarrhea
- (RTECS)
- Inhalation: No data available
- Dermal: No data available
**Skin corrosion/irritation**  
No data available

**Serious eye damage/eye irritation**  
No data available

**Respiratory or skin sensitization**  
No data available

**Germ cell mutagenicity**  
Test Type: Mutagenicity (mammal cell test):  
Result: negative  
Remarks: (National Toxicology Program)

**Carcinogenicity**

IARC:  No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP:  No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA:  No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**Reproductive toxicity**  
No data available

**Specific target organ toxicity - single exposure**  
No data available

**Specific target organ toxicity - repeated exposure**  
No data available

**Aspiration hazard**  
No data available

11.2 **Additional Information**

RTECS: WN6500000  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Substances which occur in nature

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information**

12.1 **Toxicity**  
No data available

12.2 **Persistence and degradability**  
No data available
12.3 Bioaccumulative potential  
No data available

12.4 Mobility in soil  
No data available

12.5 Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties  
No data available

12.7 Other adverse effects  
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods  
Product  
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

DOT (US)  
Not dangerous goods

IMDG  
Not dangerous goods

IATA  
Not dangerous goods

Further information  
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

SARA 302 Components  
This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components

<table>
<thead>
<tr>
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<th>Revision Date</th>
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<tr>
<td>Saccharose</td>
<td>57-50-1</td>
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Pennsylvania Right To Know Components

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<td>57-50-1</td>
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</tbody>
</table>

SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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