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

1.1 Product identifiers

Product name: Sucrose
Product Number: S5016
Brand: Sigma-Aldrich
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

2.2 GHS Label elements, including precautionary statements

Pictogram: none
Signal word: Warning
Hazard statement(s): May form combustible dust concentrations in air.
Precautionary statement(s): none

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Combustible dust
May form explosive dust-air mixture if dispersed.
SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms:
- α-D-Glucopyranosyl β-D-fructofuranoside
- α-D-Glc-(1→2)-β-D-Fru
- D(+)-Saccharose
- Sugar
- β-D-Fructofuranosyl-α-D-glucopyranoside

Formula: \( C_{12}H_{22}O_{11} \)
Molecular weight: 342.30 g/mol
CAS-No.: 57-50-1
EC-No.: 200-334-9

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saccharose</td>
<td></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.
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. 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**
For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**
No data available

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**

<table>
<thead>
<tr>
<th>Ingredients with workplace control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Saccharose</td>
</tr>
<tr>
<td>Remarks</td>
</tr>
</tbody>
</table>
### 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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>USA. NIOSH Recommended Exposure Limits</th>
<th>USA. OSHA - TABLE Z-1 Limits for Air Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>15 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>15 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>10 mg/m³</td>
<td></td>
<td>California permissible exposure limits for chemical contaminants (Title 8, Article 107)</td>
</tr>
<tr>
<td>PEL</td>
<td>5 mg/m³</td>
<td></td>
<td>California permissible exposure limits for chemical contaminants (Title 8, Article 107)</td>
</tr>
</tbody>
</table>
recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**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.

### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a)</strong> Appearance</td>
<td>Form: crystalline&lt;br&gt;Color: white</td>
</tr>
<tr>
<td><strong>b)</strong> Odor</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>c)</strong> Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>d)</strong> pH</td>
<td>5.5 - 7.5 at 342 g/l at 25 °C (77 °F)</td>
</tr>
<tr>
<td><strong>e)</strong> Melting point/freezing point</td>
<td>Melting point/range: 185 - 187 °C (365 - 369 °F)</td>
</tr>
<tr>
<td><strong>f)</strong> Initial boiling point and boiling range</td>
<td>697.11 °C 1286.80 °F at 1,013.3 hPa</td>
</tr>
<tr>
<td><strong>g)</strong> Flash point</td>
<td>(Not applicable)</td>
</tr>
<tr>
<td><strong>h)</strong> Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>i)</strong> Flammability (solid, gas)</td>
<td>May form combustible dust concentrations in air.</td>
</tr>
<tr>
<td><strong>j)</strong> Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>k)</strong> Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>l)</strong> Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>m)</strong> Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>n)</strong> Water solubility</td>
<td>342 g/l at 20 °C (68 °F) - completely soluble</td>
</tr>
<tr>
<td><strong>o)</strong> Partition coefficient: n-octanol/water</td>
<td>log Pow: -3.277</td>
</tr>
<tr>
<td><strong>p)</strong> Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>q)</strong> Decomposition temperature</td>
<td>160 - 165 °C (320 - 329 °F) -</td>
</tr>
<tr>
<td><strong>r)</strong> Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>s)</strong> Explosive properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
9.2 Other safety information
No data available

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
No data available

10.4 Conditions to avoid
No information available

10.5 Incompatible materials
Strong oxidizing agents

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 29,700 mg/kg
Remarks: Behavioral: Somnolence (general depressed activity). Cyanosis Diarrhea
Inhalation: No data available

Dermal: No data available
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
No data available

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 **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. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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**
No components are subject to the Massachusetts Right to Know Act.

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
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