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

1.1 Product identifiers

Product name: DL-Glyceraldehyde 3-phosphate solution

Product Number: G5251
Brand: Sigma
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No.: 591-59-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Company Ltd.
The Old Brickyard
NEW ROAD, GILLINGHAM
Dorset
SP8 4XT
UNITED KINGDOM

Telephone: +44 (0)1747 833000
Fax: +44 (0)1747 833313
E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number

Emergency Phone #: +44 (0)1747 833100

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Skin corrosion (Category 1B), H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
C Corrosive R34

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger
Hazard statement(s): Causes severe skin burns and eye damage.
Precautionary statement(s)
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements none


Hazard symbol(s) C Corrosive

R-phrase(s)
R34 Causes burns.

S-phrase(s)
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27 Take off immediately all contaminated clothing.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Formula: \( \text{C}_3\text{H}_7\text{O}_6\text{P} \)
Molecular Weight: 170.06 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL-Glyceraldehyde 3-phosphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>591-59-3</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>209-721-7</td>
<td>Skin Corr. 1B; H314 50 - 100 %</td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

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<td>209-721-7</td>
<td>50 - 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Oxides of phosphorus

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. 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
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20 °C

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
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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 CE approved gloves. This 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.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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

a) Appearance Form: liquid
b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point  no data available  
f) Initial boiling point and boiling range  no data available  
g) Flash point  no data available  
h) Evaporation rate  no data available  
i) Flammability (solid, gas)  no data available  
j) Upper/lower flammability or explosive limits  no data available  
k) Vapour pressure  no data available  
l) Vapour density  no data available  
m) Relative density  no data available  
n) Water solubility  no data available  
o) Partition coefficient: n-octanol/water  no data available  
p) Auto-ignition temperature  no data available  
q) Decomposition temperature  no data available  
r) Viscosity  no data available  
s) Explosive properties  no data available  
t) Oxidizing properties  no data available  

9.2 Other safety information  no data available  

SECTION 10: Stability and reactivity  
10.1 Reactivity  no data available  

10.2 Chemical stability  Stable under recommended storage conditions.  

10.3 Possibility of hazardous reactions  no data available  

10.4 Conditions to avoid  no data available  

10.5 Incompatible materials  Strong oxidizing agents  

10.6 Hazardous decomposition products  Other decomposition products - no data available  
In the event of fire: see section 5  

SECTION 11: Toxicological information  
11.1 Information on toxicological effects  

Acute toxicity  no data available (DL-Glyceraldehyde 3-phosphate)  

Skin corrosion/irritation  no data available
Serious eye damage/eye irritation
no data available (DL-Glyceraldehyde 3-phosphate)

Respiratory or skin sensitisation
no data available (DL-Glyceraldehyde 3-phosphate)

Germ cell mutagenicity
no data available (DL-Glyceraldehyde 3-phosphate)

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

Reproductive toxicity
no data available (DL-Glyceraldehyde 3-phosphate)

Specific target organ toxicity - single exposure
no data available (DL-Glyceraldehyde 3-phosphate)

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available (DL-Glyceraldehyde 3-phosphate)

Additional Information
RTECS: Not available
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea (DL-Glyceraldehyde 3-phosphate)

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 (DL-Glyceraldehyde 3-phosphate)

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
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
ADR/RID: 1760  
IMDG: 1760  
IATA: 1760

14.2 UN proper shipping name
ADR/RID: CORROSIVE LIQUID, N.O.S. (DL-Glyceraldehyde 3-phosphate)  
IMDG: CORROSIVE LIQUID, N.O.S. (DL-Glyceraldehyde 3-phosphate)  
IATA: Corrosive liquid, n.o.s. (DL-Glyceraldehyde 3-phosphate)

14.3 Transport hazard class(es)
ADR/RID: 8  
IMDG: 8  
IATA: 8

14.4 Packaging group
ADR/RID: II  
IMDG: II  
IATA: II

14.5 Environmental hazards
ADR/RID: no  
IMDG Marine pollutant: no  
IATA: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
H314 Causes severe skin burns and eye damage.  
Skin Corr. Skin corrosion

Full text of R-phrases referred to under sections 2 and 3
C Corrosive  
R34 Causes burns.

Further information
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