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

1.1 Product identifiers

Product name: Butyl acetate

Product Number: 33201
Brand: Sigma-Aldrich
Index-No.: 607-025-00-1
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.: 123-86-4

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 Chemie BV
Stationsplein 4
3331 LL ZWIJNDRECHT
NETHERLANDS

Telephone: +31 78-620-5411
Fax: +31 78-620-5421
E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number

Emergency Phone #: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 3), H226
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word: Warning
Hazard statement(s)
H226: Flammable liquid and vapour.
H336: May cause drowsiness or dizziness.
Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.

Supplemental Hazard information (EU)
EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula: C₆H₁₂O₂
Molecular weight: 116.16 g/mol
CAS-No.: 123-86-4
EC-No.: 204-658-1
Index-No.: 607-025-00-1

No components need to be disclosed according to the applicable regulations.
For the full text of the H-Statements 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
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

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

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers.

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.
Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
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.
Storage class (TRGS 510): Flammable liquids

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

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
Face shield and safety glasses 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.

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 30 min
Material tested: Camatril® (KCL 730 / Aldrich Z677442, 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**
Impervious clothing, Flame retardant antistatic protective clothing,. 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**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into
the environment must be avoided.

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### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Appearance</strong></td>
<td>Form: liquid</td>
</tr>
<tr>
<td></td>
<td>Colour: colourless</td>
</tr>
<tr>
<td><strong>b) Odour</strong></td>
<td>like fruit</td>
</tr>
<tr>
<td><strong>c) Odour Threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>d) pH</strong></td>
<td>6.2 at ca.5 g/l at 20 °C</td>
</tr>
<tr>
<td><strong>e) Melting point/freezing</strong></td>
<td>Melting point/range: -78 °C - lit.</td>
</tr>
<tr>
<td><strong>f) Initial boiling point and</strong></td>
<td>124 - 126 °C - lit.</td>
</tr>
<tr>
<td>boiling range**</td>
<td></td>
</tr>
<tr>
<td><strong>g) Flash point</strong></td>
<td>23 °C - closed cup</td>
</tr>
<tr>
<td><strong>h) Evaporation rate</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>i) Flammability (solid, gas)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>j) Upper/lower</strong></td>
<td>Upper explosion limit: 7.6 %(V)</td>
</tr>
<tr>
<td>flammability or explosive limits</td>
<td>Lower explosion limit: 1.7 %(V)</td>
</tr>
<tr>
<td><strong>k) Vapour pressure</strong></td>
<td>20 hPa at 25 °C</td>
</tr>
<tr>
<td><strong>l) Vapour density</strong></td>
<td>4.01 - (Air = 1.0)</td>
</tr>
<tr>
<td><strong>m) Relative density</strong></td>
<td>0.88 g/cm3 at 25 °C</td>
</tr>
<tr>
<td><strong>n) Water solubility</strong></td>
<td>5.3 g/l at 20 °C - OECD Test Guideline 105 - soluble</td>
</tr>
<tr>
<td><strong>o) Partition coefficient: n-octanol/water</strong></td>
<td>log Pow: 2.3 at 25 °C</td>
</tr>
<tr>
<td><strong>p) Auto-ignition temperature</strong></td>
<td>415 °C at 1.013 hPa</td>
</tr>
</tbody>
</table>
q) Decomposition temperature  No data available
r) Viscosity 0,83 mm²/s at 20 °C -
s) Explosive properties  No data available
t) Oxidizing properties  No data available

9.2 Other safety information
   Surface tension  61,3 mN/m at 20 °C
   Relative vapour density  4,01 - (Air = 1.0)

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  Heat, flames and sparks.
10.5 Incompatible materials  Strong oxidizing agents, Strong reducing agents, Strong bases
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
   LD50 Oral - Rat - female - 10.760 mg/kg
   (OECD Test Guideline 423)
   LC50 Inhalation - Rat - male and female - 4 h - > 21 mg/l
   (OECD Test Guideline 403)
   LD50 Dermal - Rabbit - male and female - > 14.112 mg/kg
   (OECD Test Guideline 402)
   Skin corrosion/irritation
   Skin - Rabbit
   Result: No skin irritation - 4 h
   (OECD Test Guideline 404)
   Serious eye damage/eye irritation
   Eyes - Rabbit
   Result: No eye irritation
   (OECD Test Guideline 405)
   Respiratory or skin sensitisation
   No data available
   Germ cell mutagenicity
   Ames test
   S. typhimurium
   Result: negative
Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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
Developmental Toxicity - Rat - Inhalation
No adverse effect has been observed in chronic toxicity tests.

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness. - Central nervous system

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
Repeated dose Rat - male and female - inhalation (vapour) - NOAEL : 2,4 mg/l
RTECS: AF7350000

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

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 18 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia (water flea) - 44 mg/l - 48 h

Toxicity to algae static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - 674,7 mg/l - 72 h

12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 83 % - Readily biodegradable
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Harmful to aquatic life.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 1123
IMDG: 1123
IATA: 1123

14.2 UN proper shipping name
ADR/RID: BUTYL ACETATES
IMDG: BUTYL ACETATES
IATA: Butyl acetates

14.3 Transport hazard class(es)
ADR/RID: 3
IMDG: 3
IATA: 3

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

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. 453/2010.

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.
EUH066 Repeated exposure may cause skin dryness or cracking.
H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

Further information
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