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

1.1 Product identifiers

- **Product name**: Methyl acetate
- **Product Number**: W267600
- **Brand**: Aldrich
- **Index-No.**: 607-021-00-X
- **CAS-No.**: 79-20-9

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)**

- Flammable liquids (Category 2), H225
- Eye irritation (Category 2A), H319
- 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 GHS Label elements, including precautionary statements

- **Pictogram**
- **Signal Word**: Danger

Aldrich - W267600
2.3 **Hazards not otherwise classified (HNOC) or not covered by GHS**
Repeated exposure may cause skin dryness or cracking.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl acetate</td>
<td>Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3; H225, H319, H336</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>
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
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

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. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). 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
Carbon dioxide (CO2) Foam 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.
Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

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

5.4 Further information
Remove container from danger zone and cool with water. 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: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. 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. Risk of explosion.

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 with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

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. Preventive skin protection recommended. Wash hands after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.
Moisture sensitive.

Storage class
Storage class (TRGS 510): 3: 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
Ingredients with workplace control parameters
### Component Parameters and Controls

<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>methyl acetate</td>
<td>79-20-9</td>
<td>TWA 200 ppm</td>
<td>USA. ACGIH TLV</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL 250 ppm</td>
<td>USA. ACGIH TLV</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 200 ppm</td>
<td>USA. NIOSH TLV</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST 250 ppm</td>
<td>USA. NIOSH TLV</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 200 ppm</td>
<td>USA. OSHA Limits</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL 200 ppm</td>
<td>California permissible exposure limits</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL 250 ppm</td>
<td>California permissible exposure limits</td>
<td></td>
</tr>
</tbody>
</table>

#### 8.2 Exposure controls

**Appropriate engineering controls**

Change contaminated clothing. Preventive skin protection recommended. 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: butyl-rubber
Minimum layer thickness: 0.7 mm
Break through time: 240 min
Material tested: Butoject® (KCL 898)

**Body Protection**

Flame retardant antistatic protective clothing.

**Respiratory protection**

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
required when vapours/aerosols 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. Risk of explosion.

### SECTION 9: Physical and chemical properties

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

| a) Appearance | Form: clear, liquid  
Color: colorless |
| b) Odor | fruity |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: -98 °C (-144 °F) - lit. |
| f) Initial boiling point and boiling range | 57 - 58 °C 135 - 136 °F - lit. |
| g) Flash point | -13 °C (9 °F) - closed cup - DIN 51755 Part 1 |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 16 % (V)  
Lower explosion limit: 3.1 % (V) |
| k) Vapor pressure | 228 hPa at 20 °C (68 °F)  
787 hPa at 50 °C (122 °F) |
| l) Vapor density | 2.8 |
| m) Density | 0.934 g/cm³ at 25 °C (77 °F)  
Relative density | No data available |
| n) Water solubility | 319 g/l at 20 °C (68 °F) |
| o) Partition coefficient: n-octanol/water | log Pow: 0.18 - Bioaccumulation is not expected. |
| p) Autoignition temperature | 454 °C (849 °F) at 1,013 hPa |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | none |
9.2 Other safety information

Surface tension 24 mN/m at 20 °C (68 °F)
Relative vapor density 2.8

SECTION 10: Stability and reactivity

10.1 Reactivity
Vapors may form explosive mixture with air.

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

10.3 Possibility of hazardous reactions
Exothermic reaction with:
Risk of ignition or formation of inflammable gases or vapours with:
Strong oxidizing agents
can decompose violently in contact with:
Bases
acids

10.4 Conditions to avoid
Warming.

10.5 Incompatible materials
rubber, various plastics

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 - male - 6,482 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
Symptoms: Possible damages: Irritation symptoms in the respiratory tract.
LD50 Dermal - Rat - male and female - > 2,000 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: Irritating to eyes.
Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: In vivo micronucleus test
Species: Rat
Cell type: Bone marrow
Application Route: Inhalation
Method: OECD Test Guideline 474
Result: negative

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
May cause drowsiness or dizziness. - Central nervous system
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

RTECS: AI9100000
narcosis, This product is metabolized into formic acid. Humans and other primates metabolize formic acid more slowly than do rodents. Formic acid can build up in the body producing toxic effects possibly leading to death; therefore, data from studies in rodents may have limited relevance for human risk assessment.

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

After absorption of toxic quantities:

Headache
Dizziness
Shortness of breath
SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish
static test LC50 - *Danio rerio* (zebra fish) - 250 - 350 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - *Daphnia magna* (Water flea) - 1,026.7 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae
static test ErC50 - *Desmodesmus subspicatus* (green algae) - > 120 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria
static test EC50 - *Pseudomonas putida* - 6,000 mg/l - 16 h
(DIN 38412)

12.2 Persistence and degradability

Biodegradability
aerobic - Exposure time 28 d
Result: 70 % - 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
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

Biological effects:
When discharged properly, no impairments in the function of adapted biological wastewater treatment plants are to be expected.
Discharge into the environment must be avoided.
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)
UN number: 1231  Class: 3  Packing group: II
Proper shipping name: Methyl acetate
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 1231  Class: 3  Packing group: II  EMS-No: F-E, S-D
Proper shipping name: METHYL ACETATE

IATA
UN number: 1231  Class: 3  Packing group: II
Proper shipping name: Methyl acetate

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
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components
methyl acetate  CAS-No.  Revision Date
79-20-9  1993-02-16

Pennsylvania Right To Know Components
methyl acetate  CAS-No.  Revision Date
79-20-9  1993-02-16
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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