1. Identification of the substance/preparation and the company/undertaking

Product Name
Methyl acetate

Manufacturer or supplier's details
Celanese Sales Germany GmbH
Am Unisys-Park 1
65843 Sulzbach (Taunus)
Germany

Celanese Pte Ltd
60 Anson Road
Maple Tree Anson #13-02
Singapore 079914

Product Information
HazCom@celanese.com

Emergency telephone number
+(65) 62656917 (Operations Room direct dial)
or fax request to +(65) 62664696 (Facsimile to Operations Room)
or email to posh.er@paccoffshore.com.sg

In China Emergency Number: 86-532-83889090 (NRCC)

Identified uses
Chemical intermediate

2. Hazards identification

GHS Classification

<table>
<thead>
<tr>
<th>Hazards</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquid</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 5</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Narcotic</td>
<td></td>
</tr>
</tbody>
</table>

Labeling

Symbol(s)
SAFETY DATA SHEET

Product Name: Methyl acetate
MSDS number: 80195
Revision Number: 6.01

Signal Word: Danger

Hazard Statements:
- H225 - Highly flammable liquid and vapor
- H313 - May be harmful in contact with skin
- H319 - Causes serious eye irritation
- H336 - May cause drowsiness and dizziness

Precautionary Statements:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P243 - Take precautionary measures against static discharge
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- 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
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- P337 + P313 - If eye irritation persists: Get medical advice/attention

3. Composition/Information on ingredients

Chemical characterization: Acetic acid methylester

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>79-20-9</td>
<td>min 99.5</td>
</tr>
</tbody>
</table>

4. First aid measures

General Information:
Remove contaminated, soaked clothing immediately and dispose of safely. Pay attention to own protection. In any case show the physician the Safety Data Sheet.

Skin:
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Eyes:
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Inhalation:
Keep at rest. Move to fresh air. Call a physician immediately.

Ingestion:
If conscious, drink plenty of water. If swallowed, do not induce vomiting - seek medical advice.

5. Fire-fighting measures
5. Fire-fighting measures

Suitable extinguishing media
Foam, Dry chemical, Carbon dioxide (CO2), Water spray

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Under conditions giving incomplete combustion, hazardous gases produced may consist of
- Carbon monoxide
- Carbon dioxide (CO2)
Vapors are heavier than air and may spread along floors

Special protective equipment for fire-fighters
self-contained breathing apparatus (EN 133).

Environmental precautions
Water streams should not be directed to the liquid, as this will cause the liquid to boil and generate more vapor. Dike and collect water used to fight fire.

Other Information
Cool containers / tanks with water spray.

6. Accidental release measures

Personal precautions
Avoid contact with the skin and the eyes. Avoid breathing vapors or mists. Provide adequate ventilation. Keep away from heat and sources of ignition.

Environmental precautions
Prevent further leakage or spillage. Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of in accordance with local regulations.

7. Handling and storage

Advice on safe handling
Provide sufficient air exchange and/or exhaust in work rooms.

Incompatible products
Oxidizing agents, Bases

Protection - fire and explosion:
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge. Ground and bond containers when transferring material. In case of fire, emergency cooling with water spray should be available.

Material storage
Store locked up. Keep in a dry, cool and well-ventilated place.
Incompatible products
Oxidizing agents, Bases

Technical measures/Storage conditions
Keep tightly closed in a dry, cool and well-ventilated place. Handle an open container with care.

8. Exposure controls / personal protection

ACGIH Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>200 PPM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>250 PPM</td>
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OSHA Exposure Limits

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</table>

Exposure controls

Engineering measures
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Personal protective equipment

General advice
Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Use only in an area equipped with a safety shower. Hold eye wash fountain available.

Hygiene measures
When using, do not eat, drink or smoke.. Take off all contaminated clothing immediately.. Wash hands before breaks and immediately after handling the product..

Respiratory protection
If aerosols or vapors are present, respiratory protection is required (gas filter AX) .

Eye protection
Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.. Equipment should conform to EN 166.

Skin protection
impervious clothing
Hand protection
Chemicals resistant gloves

Suitable material
Butyl-rubber

Type
Butoject (Company KCL) or comparable article; or refer to glove manufacturer's recommendation

Evaluation
according to EN 374: level 5

Material thickness
Approx. 0.7 mm

Break through time
240 min

9. Physical and chemical properties

Appearance
Form liquid
Color colourless
Odor fruity

Odor Threshold 4.6 ppm (gas in air)
Flash point -13°C
Method closed cup
Ignition temperature 454°C
Lower explosion limit 3.1 Vol. %
Upper explosion limit 16 Vol. %
Melting point/range -99°C
Boiling point/range 57°C @ 1013 hPa
Density 0.93 g/ml @ 20°C
pH neutral
Viscosity 0.364 mPa*s @ 25°C
Vapor pressure 228 hPa @ 20°C
787 hPa @ 50°C
Vapor density 2.8 (Air=1)
Water solubility 243.5 g/l @ 20°C
Partition coefficient (n-octanol/water) 0.18 (measured)

10. Stability and reactivity

Reactivity
Stable under normal conditions of handling, use and transportation.

Conditions to avoid
Avoid any source of ignition. Avoid contact with heat, sparks, open flame, and static discharge.

Incompatible Materials
Oxidizing agents, Bases

Hazardous Combustion or Decomposition Products:
Thermal decomposition products may include oxides of carbon.
11. Toxicological information

Potential health effects

Routes of exposure
Skin, eyes, inhalation, ingestion.

Immediate effects

Skin
Prolonged or repeated exposure may cause: Drying, cracking or inflammation of skin.

Eyes
Causes eye irritation. Symptoms of exposure may include: Eye irritation, burning sensation, pain, watering, and/or change of vision.

Inhalation
May cause irritation of respiratory tract. Symptoms of exposure may include: Central nervous system depression with nausea, dizziness, headache, stupor, uncoordinated or strange behavior or unconsciousness.

Ingestion
Essentially non-toxic.

Target organ effects
Overexposure (prolonged or repeated exposure) may cause:
Central nervous system depression
Local irritation at the site of exposure

Medical conditions which may be aggravated by exposure:
Medical conditions which may be aggravated by exposure: Eyes
Skin
Central nervous system

Methyl acetate

Acute oral toxicity
LD50: > 5000 mg/kg

Acute dermal toxicity
LD50: > 2000 mg/kg

Acute inhalation toxicity
LC50 (4h): > 49 mg/l

Skin corrosion/irritation
Not irritating

Species
rabbit

Method
OECD 404

Skin Sensitization
nonsensitizer

Serious eye damage/eye irritation
irritant

Species
rabbit eye

Method
OECD 405

in vitro Mutagenicity
Ames Test: negative - with and without metabolic activation -
Method: OECD 471

in vivo Mutagenicity
Mammalian Erythrocyte Micronucleus Test in rat: negative -
Method: OECD 474

Repeated exposure
No adverse effects

Routes of exposure
Inhalation

Species
rat
12. Ecological Information

Methyl acetate

**Acute fish toxicity**
- Species: Brachidanio rerio (zebra fish)
- Method: OECD 203
- LC50: > 250 mg/l (96h)

**Acute daphnia toxicity**
- Species: Daphnia magna
- Method: OECD 202
- EC50: > 1000 mg/l (48h)

**Toxicity to aquatic plants**
- Species: Desmodesmus subspicatus
- Method: OECD 201
- EC50: > 120 mg/l (72h)

**Biodegradation**
- Method: OECD 301 D
- Readily biodegradable

**Other potential hazards**
- The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. Disposal considerations

**Product information**
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.

**Uncleaned empty packaging**
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

14. Transport information

**US Department of Transportation**
- UN/NA Number: UN 1231
- Proper Shipping Name: Methyl acetate
- Hazard class: 3
- Packing Group: II

**ADR/RID**
- UN/ID No.: UN 1231
- Proper Shipping Name: Methyl acetate
- Hazard Class: 3
- Classification Code: F1
- Packing group: II
- Environmentally hazardous: no
- Tunnel Restriction Code: (D/E)
14. Transport information

Hazard Label(s) 3
Hazard Number 33

ADN
UN/ID No. UN 1231
Proper Shipping Name Methyl acetate
Hazard Class 3
Classification Code F1
Packing group II
Environmentally no hazardous
Hazard Labels 3

ICAO/IATA
UN-No. UN 1231
Proper Shipping Name Methyl acetate
Hazard Class 3
Packing group II
Environmentally no hazardous
Hazard Labels 3

IMDG
UN/ID No. UN 1231
Proper Shipping Name Methyl acetate
Hazard Class 3
Packing group II
Marine pollutant no
Hazard Labels 3
EmS Code F-E, S-D

15. Regulatory information

International Inventories
Listed on the chemical inventories of the following countries or qualifies for an exemption:
Australia (AICS)
Canada (DSL)
China (IECSC)
Europe (EINECS)
Japan (ENCS)
Japan (ISHL)
Korea (KECI)
New Zealand (NZIoC)
Philippines (PICCS)
United States (TSCA)
16. Other information

Observe national and local legal requirements.

Changes against the previous version are marked by ***

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable. The absence of data elements required by ANSI or 1907/2006/EC indicates that no data meeting these requirements is available.

Further information
This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality. For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com)