1. Product and company identification

Trade Name

Methyl acetate

Celanese Ltd.
222 W. Las Colinas Blvd., Suite 900N
Irving, TX  75039
United States
Phone:  972 443 4000
Internet:  www.celanese.com

Transportation emergency phone numbers:
In USA, call  800 424 9300
Outside USA, call  703 527 3887, collect calls accepted.

Identified uses
Chemical intermediate

2. Hazard Identification

GHS Classification

Hazards<Category>
Flammable liquid  Category 2
Serious eye damage/eye irritation  Category 2B
Specific target organ systemic toxicity (single exposure)  Category 3  Narcotic

Label elements

Signal Word  Danger

Hazard Statements
Highly flammable liquid and vapor
Causes eye irritation
May cause drowsiness or dizziness
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
In case of fire:
Use foam, dry chemical, carbon dioxide (CO2), water spray to extinguish.
Wear protective gloves/ eye protection/ face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
Store locked up.
Store in a well-ventilated place. Keep cool.
Dispose of contents/ container to an approved waste disposal plant.

3. Composition/information on ingredients

<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>&gt;= 95</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

**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.

**Isolation**
Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Isolate for 800 meters or 0.5 miles in all directions if tank, rail car, or tank truck in involved in fire. Evacuate downwind areas as conditions warrant to prevent exposure and to allow vapors or fumes to dissipate. Spills may expose downwind areas to toxic or flammable concentrations over considerable distances in some cases.

**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.

**Authority Notification**
Within the United States, call the National Response Center (800-424-8802) and appropriate state and local authorities if the quantity released over 24 hours is equal to or greater than the reportable quantity listed below:

7. Handling and storage

---

**Safety Data Sheet**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Methyl acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSDS number</td>
<td>80195</td>
</tr>
<tr>
<td>Revision Number</td>
<td>0</td>
</tr>
<tr>
<td>Revision Date</td>
<td>May.01.2015</td>
</tr>
<tr>
<td>Issuing date</td>
<td>May.01.2015</td>
</tr>
</tbody>
</table>

**NFPA:**  
**Health:** 2  
**Flammability:** 3  
**Instability:** 0

---

**Revision Number**

**Issuing date**

**MSDS number**

---

**EPA:**  
**NA/EN**

---

**Methyl acetate**
7. Handling and storage

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

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.

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

Material storage
Store locked up. Keep in a dry, cool and well-ventilated place.

Incompatible products
oxidizing agents, bases

8. Exposure controls / personal protection

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

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

<table>
<thead>
<tr>
<th>Components</th>
<th>2005 NIOSH IDLH</th>
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</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>3100 PPM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mexico National Exposure Limits</th>
<th>Components</th>
<th>LMPE - PPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>610 mg/m³</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>760 mg/m³</td>
</tr>
<tr>
<td></td>
<td>250 PPM</td>
</tr>
</tbody>
</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.

Protective equipment
A safety shower and eyewash should be readily available.

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.

Respiratory protection
Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH. The following is the minimum recommended equipment for an occupational exposure level. To estimate an occupational exposure level see Section 8 and Section 11.

For concentrations > 1 and < 10 times the occupational exposure level: Use air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s). The air purifying element must have an end of service life indicator, or a documented change out schedule must be established. Otherwise, use supplied air.

For concentrations more than 10 times the occupational exposure level and less than the lower of either 100 times the occupational exposure level or the IDLH: Use Type C full facepiece supplied-air respirator operated in positive-pressure or continuous-flow mode.

For concentrations > 100 times the occupational exposure level or greater than the IDLH level or unknown concentrations (such as in emergencies): Use self-contained breathing apparatus with full facepiece in positive-pressure mode or Type C positive-pressure full facepiece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus escape system.

For escape: Use self-contained breathing apparatus with full facepiece or any respirator specifically approved for escape.

Eye/face protection:
Wear chemical goggles when there is a reasonable chance of eye contact.

9. Physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>colourless</td>
</tr>
<tr>
<td>Odor</td>
<td>fruity</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>74.08</td>
</tr>
<tr>
<td>Flash point</td>
<td>-13°C(8.6°F)</td>
</tr>
</tbody>
</table>
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Method</th>
<th>closed cup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition temperature</td>
<td>454°C (849.2°F)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>3.1 Vol. %</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>16 Vol. %</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>-99°C (-146.2°F)</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>57°C (134.6°F) @ 1013 hPa</td>
</tr>
<tr>
<td>Density</td>
<td>0.93 g/ml @ 20°C</td>
</tr>
<tr>
<td>pH</td>
<td>neutral</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.364 mPa*s @ 25°C</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>228 hPa @ 20°C</td>
</tr>
<tr>
<td></td>
<td>787 hPa @ 50°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>2.8 (Air=1)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>243.5 g/l @ 20°C</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>0.18 (measured)</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Chemical stability
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.

Possibility of hazardous reactions
Incompatible with oxidizing agents, Incompatible with bases.

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:
- Eyes
- Skin
- Central nervous system

12. Ecological Information

Methyl acetate

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

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

Toxicity to aquatic plants
- EC50: > 120 mg/l (72h)
12. Ecological Information

- Species: Desmodesmus subspicatus
- Method: OECD 201
- Biodegradation: Readily biodegradable
- Method: OECD 301 D
- Other potential hazards: The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. Disposal considerations

Disposal considerations
Dispose of spilled material in accordance with state and local regulations for hazardous waste. Recommended methods are incineration or biological treatment at a federally or state-permitted disposal facility. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste.

EPA Hazardous Waste Code(s): D001

14. Transport information

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

TDG
- UN/NA Number: UN 1231
- Proper Shipping Name: METHYL ACETATE
- Class: 3
- Packing Group: II

Mexico Transport Information
- UN-No.: UN 1231
- Proper Shipping Name: Methyl acetate
- Hazard Class: 3
- Packing Group: II

ICAO/IATA
- UN-No.: UN 1231
- Proper Shipping Name: Methyl acetate
- Hazard Class: 3
Safety Data Sheet

Product name: Methyl acetate  
MSDS number: 80195  
Revision Number: 0  
Revision Date: May.01.2015  
Issuing date: May.01.2015

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

15. Regulatory Information

US State Regulations
Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):

Methyl acetate 79-20-9
- Pennsylvania: Listed
- New Jersey: Listed
- Illinois: Listed
- Massachusetts: Listed
- Rhode Island: Listed

California Prop. 65
WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm.
Unless a concentration is specified in Section 3 of the MSDS, the chemical/s below are present in trace amounts.
Acetaldehyde (75-07-0)

U.S. FEDERAL REGULATIONS

Environmental Regulations:

Methyl acetate 79-20-9
CERCLA Hazardous Substance: Listed

SARA 311:
- Acute health: Yes
- Chronic health: No
- Fire: Yes
- Sudden release of pressure: No
- Reactive: No

INTERNATIONAL REGULATIONS
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

| NFPA: | Health: 2 | Flammability: 3 | Instability: 0 |
| HMIS: | Health: 2 | Flammability: 3 | Physical Hazard: 0 |

**Prepared By**
Product Stewardship Department
Celanese

**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.

**Other Information:**
Observe national and local legal requirements
Changes against the previous version are marked by ***

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.
Abbreviation and Acronym:
ADR = Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS = Chemical Abstracts Service (division of the American Chemical Society)
CLP = Classification, Labelling and Packaging
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
ICAO = International Civil Aviation Organization
IMDG = International Maritime Code for Dangerous Goods
LC50 = Lethal Concentration
LD50 = Lethal Dose
LOAEC = Low Observed Adverse Effect Concentration
LOAEL = Low Observed Adverse Effect Level
LOEL = Low Observed Effect Level
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOEL = No Observed Effect Level
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RCR = Risk Characterization Ratio
RID = Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
R-Phrases = Risk Phrases
S-Phrases = Safety Phrases
STOT RE = Specific Target Organ Toxicity Repeated Exposure
STOT SE = Specific Target Organ Toxicity Single Exposure
STP = Sewage Treatment Plant
vPvB = very Persistent and very Bioaccumulative