1. Product and company identification

Trade Name

Methyl acetate, crude

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 1
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
                                  Causes damage to organs
                                  May cause drowsiness or dizziness
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
In case of fire:
Use foam, dry chemical, carbon dioxide (CO2), water spray to extinguish.
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.
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection/face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product
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.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
Store in a well-ventilated place. Keep cool.
Store locked up.
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>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt; 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

NFPA: Health: 2 Flammability: 3 Instability: 0

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. Water used to fight fire runoff can cause environmental damage. Dike and collect water used to fight fire.

Other Information
Cool containers / tanks with water spray.

6. Accidental release measures

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

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

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

OSHA Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>200 PPM</td>
</tr>
<tr>
<td>Methanol</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>
</tr>
<tr>
<td>Methanol</td>
<td>250 PPM</td>
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</table>

ACGIH Exposure Limits

<table>
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<tr>
<th>Components</th>
<th>TWA</th>
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</tr>
<tr>
<td>Methanol</td>
<td>250 PPM</td>
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<table>
<thead>
<tr>
<th>Components</th>
<th>2005 NIOSH IDLH</th>
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<tbody>
<tr>
<td>Methyl acetate</td>
<td>3100 PPM</td>
</tr>
<tr>
<td>Methanol</td>
<td>25,000 PPM</td>
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</table>

Mexico National Exposure Limits
Components LMPE - PPT

<table>
<thead>
<tr>
<th>Components</th>
<th>LMPE - PPT</th>
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</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>610 mg/m³</td>
</tr>
<tr>
<td>Methanol</td>
<td>260 mg/m³</td>
</tr>
</tbody>
</table>

Components STEL

<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>Methanol</td>
<td>310 mg/m³</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.

Skin protection:
Wear impervious clothing and gloves when there is a reasonable chance for skin contact.
Eye/face protection:
Wear chemical goggles when there is a reasonable chance of eye contact.

9. Physical and chemical properties

Appearance
- Form: liquid
- Color: colourless
- Odor: fruity

Flash point: -13°C (8.6°F)
Method: closed cup
Ignition temperature: approx 440°C (824°F)
Lower explosion limit: not determined
Upper explosion limit: not determined
Melting point/range: -99°C (-146.2°F)
Boiling point/range: 57°C (134.6°F) @ 1013 hPa

Density: Not determined
pH: not determined
Vapor pressure: not determined
Vapor density: > 1.1 (Air=1)
Water solubility: not determined
Partition coefficient: (n-octanol/water) not determined

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
May be harmful if absorbed through skin. Symptoms of overexposure include: Central nervous system depression with headache, stupor, uncoordinated or strange behavior or unconsciousness. Drying, cracking or inflammation of skin. Prolonged and/or repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death.

### Eyes
Causes eye irritation. Symptoms of exposure may include: Eye irritation, burning sensation, pain, watering, and/or change of vision. Eye injury which may persist for several days.

### 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. Adverse effects on vision.

### Ingestion
A small amount of Methanol (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received.

## Target organ effects
Overexposure (prolonged or repeated exposure) may cause:
- Central nervous system depression
- Injury to the eyes
- 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

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute oral toxicity</strong></td>
<td>LD50: &gt; 5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td><strong>Acute dermal toxicity</strong></td>
<td>LD50: &gt; 2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td><strong>Acute inhalation toxicity</strong></td>
<td>LC50 (4h): &gt; 49 mg/l</td>
<td></td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td>Not irritating</td>
<td>OECD 404</td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td>rabbit</td>
<td></td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Skin Sensitization**
nonsensitizer

**Serious eye damage/eye irritation**
irritant

<table>
<thead>
<tr>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>rabbit eye</td>
<td>OECD 405</td>
</tr>
</tbody>
</table>

**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
# Safety Data Sheet

<table>
<thead>
<tr>
<th>Product name</th>
<th>Methyl acetate, crude</th>
<th>NAGH/EN</th>
</tr>
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<tbody>
<tr>
<td>MSDS number</td>
<td>80480</td>
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<tr>
<td>Revision Number</td>
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<tr>
<td>Revision Date</td>
<td>Oct.06.2015</td>
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</tr>
<tr>
<td>Issuing date</td>
<td>Oct.06.2015</td>
<td></td>
</tr>
</tbody>
</table>

## Methyl acetate

- **Routes of exposure**
  - Inhalation
  - Species: rat
  - Method: OECD 412
  - NOAEL: 1057 mg/m³

## Methanol

- **Acute oral toxicity**
  - LD₅₀: > 5000 mg/kg
- **Acute dermal toxicity**
  - LD₅₀: > 5000 mg/kg
- **Acute inhalation toxicity**
  - LC₅₀ (4h): > 5 mg/l
- **Skin corrosion/irritation**
  - irritating
  - Species: rabbit eye
- **Skin Sensitization**
  - nonsensitizer
  - Species: guinea pig
  - Method: Maximization

## Ecological Information

### Methyl acetate

- **Acute fish toxicity**
  - LC₅₀: > 250 mg/l (96h)
  - Species: Brachidano 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)
  - Species: Desmodesmus subspicatus
  - Method: OECD 201
12. Ecological Information

Biodegradation

Readily biodegradable

OECD 301 D

Other potential hazards

The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. 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, U154

14. Transport information

US Department of Transportation

UN/NA Number: UN 1993
Proper Shipping Name Flammable liquids, n.o.s.
Hazard Inducer (Methyl acetate / Methanol)
Hazard class 3
Packing Group II
Reportable Quantity (RQ) 5000lb/2270kg (Methanol)
Emergency Resp. Guide 128

TDG

UN/NA Number: UN 1993
Proper Shipping Name FLAMMABLE LIQUID, N.O.S.
Hazard Inducer (Methyl acetate / Methanol)
Class: 3
Packing Group: II

Mexico Transport Information

UN-No. UN 1993
Proper Shipping Name Flammable liquids, n.o.s.
Hazard Inducer (Methyl acetate / Methanol)
Hazard Class 3
Packing Group II
Emergency Response Guide 128
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

**Methanol 67-56-1**
- Pennsylvania: Listed
- New York: 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)
- Methanol (67-56-1)

**U.S. FEDERAL REGULATIONS**
Environmental Regulations:

Methyl acetate 79-20-9
CERCLA Hazardous Substance  Listed

Methanol 67-56-1
EPCRA Section 313  Listed
CERCLA Hazardous Substance  Listed

SARA 311:
Acute health:  Yes
Chronic health:  Yes
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