

Product name Ethyl acetate
MSDS number 80034
Revision Number 10.03***

Revision Date
Issuing date

NAGH/EN
Sep.04.2015
Dec.13.2017***

1. Product and company identification

Trade Name

Ethyl acetate

Manufacturer, importer, supplier

Celanese Ltd.

222 W. Las Colinas Blvd., Suite 900N

Irving, TX 75039

United States

Phone: 972 443 4000

Internet: www.celanese.com

Celanese Operations México, S. de R.L. de C.V:

Freeway Coatzacoalcos-Villahermosa Km. 12.3 C.P. 96400

Coatzacoalcos, Ver

Mexico

Phone: (921) 211-5000/211-5048

Fax: (921) 211-5003***

Transportation emergency phone numbers:

In USA, call 800 424 9300

Outside USA, call 703 527 3887, collect calls accepted.

In Mexico, call (921) 211-5048, 211-5000

Identified uses

Solvent

2. Hazard Identification

GHS Classification

Hazards

Flammable liquid

Specific target organ systemic toxicity (single exposure)

Category

Category 2

Category 3 Narcotic

Label elements



Signal Word

Danger***

Hazard Statements

Highly flammable liquid and vapor

May cause drowsiness or dizziness

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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) to extinguish.

Wear protective gloves/ eye protection/ face protection.

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 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

Components	CAS-No	Percent %
Ethyl acetate	141-78-6	min 99.7

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

Rinse with plenty of water. If swallowed, do not induce vomiting - seek medical advice.

5. Fire-fighting measures

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5. Fire-fighting measures

NFPA: Health: 1 **Flammability:** 3 **Instability:** 0

Suitable extinguishing media

Foam, Dry chemical, Carbon dioxide (CO₂)

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)

Combustion gases of organic materials must in principle be graded as inhalation poisons

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 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

Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. 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 is 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:

5000lb/2270kg

7. Handling and storage

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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

Keep away from: , peroxides, strong acids, oxidizing agents, amines

8. Exposure controls / personal protection

OSHA Exposure Limits

Components	TWA
Ethyl acetate	400 PPM

ACGIH Exposure Limits

Components	TWA
Ethyl acetate	400 PPM

Components	2005 NIOSH IDLH
Ethyl acetate	10,000 PPM

Mexico National Exposure Limits

Components	LMPE - PPT	
Ethyl acetate	1400 mg/m ³	400 PPM

Components	Mexican Carcinogen Category
Ethyl acetate	A4

Exposure controls

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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 eyebath 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 to prevent contact. Butyl rubber is recommended. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

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
Molecular Weight	88.11
Flash point	-4°C(25°F)
Method	closed cup

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9. Physical and chemical properties

Ignition temperature	427°C (800°F)
Decomposition Temperature	Not determined
Lower explosion limit	2.2 Vol. %
Upper explosion limit	11.5 Vol. % (-117°F)
Boiling point/range	77.1°C (171°F) @ 1013 hPa
Density	0.9003 g/ml @ 20°C
pH	not determined
Viscosity	0.4508 mPa*s @ 20°C
Vapor pressure	98.3 hPa @ 20°C 379 hPa @ 50°C (74 mmHg)
Vapor density	3.04 (Air=1)
Evaporation Rate	4.5 (n-Butyl acetate = 1)
Water solubility	80 g/l @ 25°C
Solubility in other solvents	miscible with, Ethanol, Diethyl ether, very soluble in, Acetone, Benzene
Partition coefficient (n-octanol/water)	0.68 (measured)

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

Keep away from:
peroxides
oxidizing agents
strong acids
amines

Hazardous Combustion or Decomposition Products:

Thermal decomposition products may include oxides of carbon.

Possibility of hazardous reactions

Hazardous polymerization does not occur.

11. Toxicological information

Potential health effects

Routes of exposure Skin, eyes, inhalation.

Immediate effects

Skin Prolonged or repeated contact may dry skin and cause irritation.

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Eyes	Essentially non-irritating.
Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system Symptoms of exposure may include: Nausea, headache and/or dizziness.
Ingestion	Essentially non-toxic.

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

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

Ethyl acetate

Acute oral toxicity	LD50: 4934 mg/kg
Acute dermal toxicity	LD50: > 20000 mg/kg
Acute inhalation toxicity	LC100 (6h): 22.5 ppm
Skin corrosion/irritation	No skin irritation
Species	rabbit
Method	OECD 404
Skin Sensitization	nonsensitizer
Species	guinea pig
Method	OECD 406
Serious eye damage/eye irritation	No eye irritation
Species	rabbit eye
Method	OECD 405
Carcinogenic effects	No evidence of carcinogenicity
in vitro Mutagenicity	Ames Test: negative - with and without metabolic activation - Method: OECD 471 Cytogenicity Assay in Chinese hamster cells: negative - with and without metabolic activation - Method: OECD 473 Mouse lymphoma cell gene-mutation: negative - with and without metabolic activation - Method: OECD 476 (Reference substance: Ethanol)
in vivo Mutagenicity	Mammalian Erythrocyte Micronucleus Test in Chinese hamster and male mice: negative - Method: OECD 474
Reproductive toxicity	No effects on fertility (Reference substance: Ethanol)
Routes of exposure	oral gavage
Species	mouse
	NOAEL: 26400 mg/kg bw/day (for Ethyl acetate on a molar basis)
Developmental effects	No teratogenic, maternal or developmental effects (Reference substance: Ethanol)

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Routes of exposure	Inhalation
Species	rat
Repeated exposure	NOAEC: 73300 mg/m ³
Routes of exposure	No adverse effects
Species	oral gavage
Method	rat
Repeated Exposure	EPA OTS 795.2600
Routes of exposure	NOAEL: 900 mg/kg bw/day
Species	No adverse effects
Method	Inhalation
	rat
	EPA OTS 798.2450
	NOEC: 1.28 mg/l

12. Ecological Information

Ethyl acetate

Acute fish toxicity	LC50: 230 mg/l (96h)
Species:	Pimephales promelas (Fathead minnow)
Method	EPA E03-05
Acute daphnia toxicity	EC50: 3090 mg/l (24h)
Species:	Daphnia magna
Method	DIN 38412, Part 11
	NOEC (21 d): 2.4 mg/l
Species:	Daphnia magna
Toxicity to aquatic plants	NOEC (72h): > 100 mg/l
Species:	Desmodemus subspicatus
Method	OECD 201
Toxicity to bacteria	EC3 (16h): 650 mg/l
Species:	Pseudomonas putida
Method	DIN 38412 T.8
Biodegradation	Readily biodegradable
Method	BOD Standard Method
Other potential hazards	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

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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): U112

14. Transport information

US Department of Transportation

UN/NA Number: UN 1173
 Proper Shipping Name Ethyl acetate
 Hazard class 3
 Packing Group II
 Reportable Quantity (RQ) 5000lb/2270kg
 Emergency Resp. Guide 129

TDG

UN/NA Number: UN 1173
 Proper Shipping Name ETHYL ACETATE
 Class: 3
 Packing Group: II

Mexico Transport Information

UN-No. UN 1173
 Proper Shipping Name Ethyl acetate
 Hazard Class 3
 Packing Group II

ICAO/IATA

UN-No. UN 1173
 Proper Shipping Name Ethyl acetate
 Hazard Class 3
 Packing group II

IMDG

UN/ID No. UN 1173
 Proper Shipping Name Ethyl acetate
 Hazard Class 3
 Packing group II
 Marine pollutant no
 EmS Code F-E, S-D

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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):

Ethyl acetate 141-78-6

Pennsylvania	Listed
New York	Listed
New Jersey	Listed
Illinois	Listed
Massachusetts	Listed
Rhode Island	Listed

U.S. FEDERAL REGULATIONS

TSCA Inventory:

We certify that all components are either on the TSCA inventory or qualify for an exemption.

Environmental Regulations:

Ethyl acetate 141-78-6

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)

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16. Other information

NFPA:	Health: 1	Flammability: 3	Instability: 0
HMIS:	Health: 1	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 ***

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)

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