

Safety data sheet according to regulation (EG) Nr. 1907/2006

Product name	Ethyl acetate, urethane grade		EUGB/EN
MSDS number	80034	Revision Date	Jul.23.2009***
Revision Number	3***.01***	Issuing date	Jul.23.2009***

Inhalation	Keep at rest. Move to fresh air. Call a physician immediately.
Skin	Wash off immediately with soap and plenty of water 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.
Ingestion	Rinse with plenty of water. If swallowed, do not induce vomiting - seek medical advice.
Notes to physician	
Main symptoms	Vapours may cause irritation to the eyes, respiratory system and the skin, Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
Treatment	Treat symptomatically. In case of lung irritation first treatment with dexametason aerosol (spray). In case of choking: administration of activated charcoal and a saline laxative agent..

5. Fire-fighting measures

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 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.

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

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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

Handling

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.

Temperature class

T2

Storage

Technical measures/Storage conditions

Keep tightly closed in a dry, cool and well-ventilated place. Handle and open container with care.

German storage class

3A: Flammable liquids.

8. Exposure controls / personal protection

National occupational exposure limits

Components	TWA	
Ethyl acetate		200 PPM

Components	STEL	
Ethyl acetate	400 PPM	

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.

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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	In appearance of aerosol or vapor protection required (gas filter A) .
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 4
Material thickness	approx 0.7 mm
Break through time	approx 120 min

9. Physical and chemical properties

Appearance

Form	liquid
Colour	colourless
Odor	fruity

Flash point	-4°C***
Method	closed cup
Ignition temperature	427°C***
Lower explosion limit	2 Vol. %
Upper explosion limit	12.8 Vol. %

Melting point/range	-83°C***
Boiling point/range	77°C*** @ 1013 hPa***

Density	0.90 g/ml @ 20°C***
Viscosity	0.423 mPa*s @ 25°C***
vapor pressure	98 hPa @ 20°C*** 379 hPa @ 50°C***
vapor density	3.04 (Air=1)***
Evaporation Rate	4.5 (n-Butyl acetate = 1)
Water solubility	80 g/l @ 25°C***
Partition coefficient	0.73 (measured)***
(n-octanol/water)	

10. Stability and reactivity

Stability	Stable under normal conditions of handling, use and transportation.
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Conditions to avoid	Avoid any source of ignition.. Avoid contact with heat, sparks, open flame, and static discharge..
Materials to avoid	Keep away from:, peroxides, oxidizing agents, strong acids, amines
Thermal decomposition	No decomposition if used as directed. If heated to thermal decomposition the following decomposition products may occur depending on the conditions. carbon oxides.
Hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological information

Ethyl acetate

Oral	LD50: >5000 mg/kg, rat
Dermal	LD50: >18 g/kg, rabbit
Inhalation	LC50: 58 mg/l, rat, 6h***
Skin irritation	Non-irritant***
Species	rabbit
Eye Irritation	Non-irritant***
Species	rabbit eye
in vitro Mutagenicity	Ames test - negative with and without activation CHO cell chromosome aberration - negative without activation CHO cell sister-chromatid-exchange (SCE) - negative without activation CHO cell sister-chromatid-exchange (SCE) - positive with activation Aneuploidy (change chromosome number) in yeast - positive with and without metabolic activation***
in vivo Mutagenicity	Hamster micronucleus - negative
Neurotoxicity	90-day neurotoxicity screen rat - negative
Routes of exposure	inhalation

12. Ecological information

Ethyl acetate

Toxicity to fish	LC50: 230 mg/l (96h)
Species	Pimephales promelas (Fathead minnow)
Toxicity to daphnia	EC50: 164 mg/l (48h)
Species	Daphnia cucullata
Species	NOEC (21 d): 12 mg/l
Method	Daphnia magna*** semi-static conditions
Toxicity to algae	EC50: > 900 mg/l (72h)
Species	Scenedesmus subspicatus

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Ethyl acetate

Toxicity to bacteria	Method	OECD 201
		EC0: 650 mg/l (16h)
Biodegradation	Species	Pseudomonas putida
		100 % (28d) of ThOD
	Species	Domestic sewage
	Method	Closed bottle test

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

ADR/RID

UN/ID No.	UN 1173
Proper Shipping Name	Ethyl acetate
Hazard Class	3
Packing group	II
Tunnel Restriction Code	(D/E)
Hazard Number	33

ADNR

ADNR: Container and Tanker***

UN/ID 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
EmS Code	F-E, S-D

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15. Regulatory information

Labelling in accordance with EC directives

EC label

Symbol(s) F - Highly flammable.
Xi - Irritant.

R-phrases(s) R11 - Highly flammable.
R36 - Irritating to eyes.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapors may cause drowsiness and dizziness.

S-phrase(s) S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33 - Take precautionary measures against static discharges.

Water Hazard Class (WGK):

WGK Class 1
WGK Reg-Nr. 95
WGK Source Classification according to VwVwS, Annex 1 or 2

Ethyl acetate 141-78-6

Directive 76/769/EEC Listed.

Directive 98/24/EC Listed.

16. Other information

Ethyl acetate

R11 - Highly flammable
R36 - Irritating to eyes
R66 - Repeated exposure may cause skin dryness or cracking
R67 - vapors may cause drowsiness and dizziness

For further information, see:

For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com).

Other Information:

- Observe national and local legal requirements

Changes against the previous version are marked by ***

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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 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.