

SAFETY DATA SHEET

Product name	Acetic acid 99-100%	AGHS/EN	
MSDS number	80002	Revision Date	Apr.28.2011
Revision Number	7.02	Issuing date	Mar.02.2012

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

Product name
Acetic acid 99-100%

Manufacturer or supplier's details

Celanese (Shanghai) International Trading Co., Ltd.

Room 239, Xinmao Building
South Taizhong Road
Waigaoqiao Free Trade Zone
Shanghai, China

Celanese Pte Ltd

10 Anson Road, #14-01 / 02
International Plaza
Singapore 079903

Product Information

Email: Info.Chemicals.CN@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: 86-532-83889090 (NRCC)

End Use:

Chemical intermediate, Agrochemicals, Cleaning agent, Process chemicals

2. Hazards identification

GHS Classification

Hazards

Flammable liquid
Acute oral toxicity
Skin corrosion/irritation

Category

Category 3
Category 5
Category 1A

Symbol(s)



Labeling

Signal Word

Danger

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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)
nitrogen oxides (NO_x)
Combustion gases of organic materials must in principle be graded as inhalation poisons

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

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.

Environmental precautions

Prevent further leakage or spillage. Do not discharge into the drains/surface waters/groundwater. Dike and collect water used to fight fire.

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.

Additional information

Consult trained personnel. Consider the information for "Personal Protection" in chapter 8 of this Safety Data Sheet.

7. Handling and storage

Handling

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.

Advice on safe handling

Provide sufficient air exchange and/or exhaust in work rooms.

Incompatible products

Keep away from: , bases, amines

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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.

Reduce the release of the substance or mixture to the environment

See Section 8: Environmental exposure controls

Temperature class

T1

Storage

Material storage

Keep in a dry, cool and well-ventilated place.

Incompatible products

Keep away from:., bases, amines

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

ACGIH Exposure Limits

Components	TWA
Acetic acid	10 PPM

Components	STEL
Acetic acid	15 PPM

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

Do not get in eyes, on skin, or on clothing. 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.

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Respiratory protection	If aerosols or vapors are present, respiratory protection is required (gas filter E) .
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 Type	Butyl-rubber Butoject (Company KCL) or comparable article; or refer to glove manufacturer's recommendation
Evaluation	according to EN 374: level 6
Material thickness	approx. 0.3 mm
Break through time	approx. 480 min
Suitable material Type	butyl-rubber Butoject (Company KCL) or comparable article; or refer to glove manufacturer's recommendation
Evaluation	according to EN 374: level 6
Material thickness	approx. 0.7 mm
Break through time	approx. 480 min

Environmental exposure controls

Do not discharge into the drains/surface waters/groundwater

Environmental Precautions

Should not be released into the environment

9. Physical and chemical properties

Appearance

Form	liquid
Color	colourless
Odor	pungent

Odor Threshold	24.3 ppm (gas in air)
Molecular Weight	60.05 g/mol
Flash point	39°C
Method	closed cup
Ignition temperature	463°C
Decomposition Temperature	not determined
Lower explosion limit	4.0 Vol. %
Upper explosion limit	19.9 Vol. %
Flammability (solids)	not applicable
Melting point/range	17°C
Boiling point/range	118°C
Density	1.045 g/ml @ 25°C
pH	2.4 @ 60 g/l
Viscosity	1.056 mPa*s @ 25°C
Vapor pressure	21 hPa @ 25°C

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9. Physical and chemical properties

	77 hPa @ 50°C
Vapor density	2.07 (Air=1)
Evaporation Rate	0.97 (n-Butyl acetate = 1)
Water solubility	miscible
Solubility in other solvents	miscible with, Ethanol, Diethyl ether, Acetone, Benzene, soluble in, Chloroform
Partition coefficient (n-octanol/water)	-0.17 (measured)
Explosive Properties	not applicable based on consideration of the structure
Oxidizing Properties	not applicable based on consideration of the structure
Surface Tension	27.10 mN/m @ 25°C
Dissociation constant	4.76 @ 25°C

10. Stability and reactivity

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

11. Toxicological information

Acetic acid

Acute oral toxicity	LD50: 3310 mg/kg
Species	rat
Acute inhalation toxicity	LC50 (4h): > 40000 mg/m ³
Species	rat
Skin corrosion/irritation	corrosive
Species	rabbit
Method	OECD 404
Serious eye damage/eye irritation	corrosive
Species	rabbit eye
Method	OECD 405
Skin Sensitization	nonsensitizer
in vitro Mutagenicity	Ames Test: negative - with and without metabolic activation - Method: OECD 471 In vitro Mammalian Chromosome aberrations in Chinese Hamster Cells: negative - with and without metabolic activation - Method: OECD 473

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11. Toxicological information

in vivo Mutagenicity

In vivo Mammalian Erythrocyte Micronucleus Test: negative
- Method: EU Method B.12
(Reference substance: Acetic anhydride)

Carcinogenic effects

No evidence of carcinogenicity

Developmental effects

No evidence of reproductive and developmental toxicity

Routes of exposure

oral gavage

Species

rabbit, rat, mouse

Method

EU Method B.31

Type of study

NOAEL: 1600 mg/kg bw/day

Prenatal Developmental Toxicity Study

Repeated exposure

No adverse effects.

Routes of exposure

oral gavage

Species

rat, male

Type of study

NOAEL: 290 mg/kg bw/day

8-week oral subchronic toxicity study

12. Ecological information

Acetic acid

Acute fish toxicity

Species:

LC50: > 300.82 mg/l (96h)

Method

Oncorhynchus mykiss (rainbow trout)

Acute daphnia toxicity

Species:

OECD 203

Method

EC50: > 300.82 mg/l (48h)

Daphnia magna

Toxicity to aquatic plants

Species:

OECD 202

Method

EC50: > 300.82 mg/l (72h)

Skeletonema costatum

Toxicity to bacteria

Species:

ISO 10253

EC3 (16h): 850 mg/l

Pseudomonas putida

Biodegradation

Method

Readily biodegradable

OECD 301 C

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

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14. Transport information

US Department of Transportation

UN/NA Number:	UN 2789
Proper Shipping Name	Acetic acid, glacial
Hazard class	8
Subsidiary hazard	3
Packing Group	II
Reportable Quantity (RQ)	5000 lb/2270kg
Emergency Resp. Guide	132

ADR/RID

UN/ID No.	UN 2789
Proper Shipping Name	Acetic acid, glacial
Hazard Class	8
Subsidiary Risk	3
Classification Code	CF1
Packing group	II
Environmentally hazardous	no
Tunnel Restriction Code	(D/E)
Hazard Label(s)	8 + 3
Hazard Number	83

ADNR

	ADNR: Container and Tanker
UN/ID No.	UN 2789
Proper Shipping Name	Acetic acid, glacial
Hazard Class	8
Subsidiary Risk	3
Classification Code	CF1
Packing group	II
Environmentally hazardous	no
Hazard Labels	8 + 3

ICAO/IATA

UN-No.	UN 2789
Proper Shipping Name	Acetic acid, glacial
Hazard Class	8
Subsidiary Risk	3
Packing group	II
Environmentally hazardous	no
Hazard Labels	8 + 3

IMDG

UN/ID No.	UN 2789
Proper Shipping Name	Acetic acid, glacial

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14. Transport information

Hazard Class	8
Subsidiary Risk	3
Packing group	II
Marine pollutant	no
Hazard Labels	8 + 3
EmS Code	F-E, S-C

15. Regulatory information

INTERNATIONAL REGULATIONS

This substance is classified as dangerous according to Chinese legislation

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

HMIS: Health: 3 Flammability: 2 Physical Hazard: 0

Prepared By

Product Stewardship Department
Celanese

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)