

**Product name** Acetic acid solution > 25% to <= 50%  
**MSDS number** 80516C  
**Revision Number** 0

**Revision Date** NAGH/EN  
**Issuing date** May.19.2015  
May.19.2015

## 1. Product and company identification

**Trade Name**

### Acetic acid solution > 25% to <= 50%

**Celanese Ltd.**

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Irving, TX 75039  
United States  
Phone: 972 443 4000  
Internet: [www.celanese.com](http://www.celanese.com)

**Transportation emergency phone numbers:**

In USA, call 800 424 9300  
Outside USA, call 703 527 3887, collect calls accepted.

**Identified uses**

Food industry

## 2. Hazard Identification

**GHS Classification**

**Hazards**

Flammable liquid  
Skin corrosion/irritation  
Serious eye damage/eye irritation

**Category**

Category 4  
Category 1A  
Category 1

**Label elements**



**Signal Word**

Danger

**Hazard Statements**

Combustible liquid  
Causes severe skin burns and eye damage  
Causes serious eye damage

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## Precautionary statements

Keep away from flames and hot surfaces - No smoking

In case of fire:

Use foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water spray to extinguish.

Wear protective gloves/ eye protection/ face protection.

Do not breathe dusts or mists

Wash face, hands and any exposed skin thoroughly after handling.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

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 %
Acetic acid	64-19-7	> 25 - < 50

## 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

Obtain medical attention. Wash off immediately with plenty of water for at least 15 minutes.

### 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.

### Notes to physician

Observe for latent pulmonary edema.

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## 5. Fire-fighting measures

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

### Suitable extinguishing media

Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>), 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 (CO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>)

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.

### Isolation

Keep unnecessary people away; isolate hazard area and deny entry. 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. 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.

### 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:

6250 lb/2835kg

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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: , bases, amines

## 8. Exposure controls / personal protection

### OSHA Exposure Limits

Components	TWA
Acetic acid	10 PPM

### ACGIH Exposure Limits

Components	TWA
Acetic acid	10 PPM

Components	STEL
Acetic acid	15 PPM

Components	2005 NIOSH IDLH
Acetic acid	50 PPM

### Mexico National Exposure Limits

Components	LMPE - PPT
Acetic acid	25 mg/m <sup>3</sup> 10 PPM

Components	STEL
Acetic acid	37 mg/m <sup>3</sup> 15 PPM

Components	Mexican Carcinogen Category
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# Safety Data Sheet



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Acetic acid	Not applicable
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## 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 eyebath should be readily available.

### 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.

### Respiratory protection

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. Neoprene 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.. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face..

## 9. Physical and chemical properties

### Appearance

<b>Form</b>	liquid
<b>Color</b>	colourless
<b>Odor</b>	pungent

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## 9. Physical and chemical properties

<b>Flash point</b>	> 61°C(141.8°F)
<b>Method</b>	closed cup
<b>Melting point/range</b>	> -20 - < -9 °C (calculated) (-4 - 15.8°F)
<b>Boiling point/range</b>	101 - 102°C @ 1013 hPa (calculated) (213.8 - 215.6°F)
<b>Density</b>	1.035 - 1.061 g/ml @ 15°C
<b>Method</b>	calculated
<b>pH</b>	2.2
<b>Vapor density</b>	> 1 (Air=1)
<b>Water solubility</b>	miscible

## 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:

amines  
bases

### 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, ingestion.

### Immediate effects

<b>Skin</b>	Causes skin burns. May be harmful if absorbed through skin. Symptoms of overexposure include: Redness or discoloration, swelling, itching, burning or blistering of skin.
<b>Eyes</b>	Exposure to liquid causes severe eye burns, damage irreversible. Exposure to vapors Causes eye irritation. Symptoms of exposure may include: Eye irritation, burning sensation, pain, watering, and/or change of vision.
<b>Inhalation</b>	Causes respiratory tract irritation. Symptoms of exposure may include: Nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Accumulation of fluid in the lungs (pulmonary edema); symptoms can be delayed for several hours.

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## Ingestion

Causes digestive tract burns. Symptoms of exposure may include: Nausea, vomiting, loss of appetite, gastrointestinal irritation and/or diarrhea. Inflammation of mouth, throat, esophagus and/or stomach.

## Target organ effects

Overexposure (prolonged or repeated exposure) may cause:  
Injury to the eyes  
Digestive tract damage  
Respiratory tract damage  
Skin damage.

**Medical conditions which may be aggravated by exposure:** Respiratory Tract  
Skin  
Eyes

## Acetic acid

<b>Acute oral toxicity</b>	LD50: 3310 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (4h): > 40000 mg/m <sup>3</sup>
<b>Skin corrosion/irritation</b>	corrosive
Species	rabbit
Method	OECD 404
<b>Skin Sensitization</b>	nonsensitizer
<b>Serious eye damage/eye irritation</b>	corrosive
Species	rabbit eye
Method	OECD 405
<b>Carcinogenic effects</b>	No evidence of carcinogenicity
<b>in vitro Mutagenicity</b>	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
<b>in vivo Mutagenicity</b>	In vivo Mammalian Erythrocyte Micronucleus Test: negative - Method: EU Method B.12 (Reference substance: Acetic anhydride)
<b>Developmental effects</b>	No evidence of reproductive and developmental toxicity
Routes of exposure	oral gavage
Species	rabbit rat mouse
<b>Repeated exposure</b>	NOAEL: 1600 mg/kg bw/day
Routes of exposure	No adverse effects
Species	oral gavage
	rat male
	NOAEL: 290 mg/kg bw/day

## 12. Ecological Information

### Acetic acid

**Acute fish toxicity** LC50: > 300.82 mg/l (96h)

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## 12. Ecological Information

<b>Acute daphnia toxicity</b>	Species: Oncorhynchus mykiss (rainbow trout)
	Method: OECD 203
	EC50: > 300.82 mg/l (48h)
<b>Toxicity to aquatic plants</b>	Species: Daphnia magna
	Method: OECD 202
	EC50: > 300.82 mg/l (72h)
<b>Toxicity to bacteria</b>	Species: Skeletonema costatum
	Method: ISO 10253
<b>Biodegradation</b>	EC3 (16h): 850 mg/l
	Species: Pseudomonas putida
	Method: Readily biodegradable
<b>Other potential hazards</b>	OECD 301 C
	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, D002

## 14. Transport information

### US Department of Transportation

<b>UN/NA Number:</b>	UN 2790
<b>Proper Shipping Name</b>	Acetic acid solution
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Reportable Quantity (RQ)</b>	6250 lb/2835kg

### TDG

<b>UN/NA Number:</b>	UN 2790
<b>Proper Shipping Name</b>	ACETIC ACID SOLUTION
<b>Class:</b>	8
<b>Packing Group:</b>	III



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## ICAO/IATA

<b>UN-No.</b>	UN 2790
<b>Proper Shipping Name</b>	Acetic acid solution
<b>Hazard Class</b>	8
<b>Packing group</b>	III

## IMDG

<b>UN/ID No.</b>	UN 2790
<b>Proper Shipping Name</b>	Acetic acid solution
<b>Hazard Class</b>	8
<b>Packing group</b>	III
<b>Marine pollutant</b>	no
<b>EmS Code</b>	F-A, S-B

## 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):

#### Acetic acid 64-19-7

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:

#### Acetic acid 64-19-7

CERCLA Hazardous Substance	Listed
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#### SARA 311:

<b>Acute health:</b>	Yes
<b>Chronic health:</b>	No
<b>Fire:</b>	Yes
<b>Sudden release of pressure:</b>	No
<b>Reactive:</b>	No

### INTERNATIONAL REGULATIONS

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## 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: 3	Flammability: 2	Instability: 0
HMIS:	Health: 3	Flammability: 2	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 \*\*\*

**For industrial use only.** The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Celanese makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Material safety data sheets are provided on the Internet by Celanese as a service to its customers. Possession of an Internet MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.

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## 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  
 IBC Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IMO)  
 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  
 MEST = Mouse Ear Swelling Test  
 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