Glacial Acetic Acid, Food/Kosher Grade

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Glacial Acetic Acid, Food/Kosher Grade

Product code : 000000000050000989

Manufacturer or supplier's details

Company : Celanese (Shanghai) International Trading Co., Ltd

Address : 4560 Jinke Road, Zhangjiang, Pudong
Shanghai, China 020 201210

Telephone : 86-21-38619288

Emergency telephone number : CHEMTREC International phone number: +1-703-527 3887, +86 532 8388-9090 (China, 24h)

E-mail address : HazCom@celanese.com

Recommended use of the chemical and restrictions on use

Recommended use : Food additive
Restrictions on use : None known.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : liquid
Colour : colourless
Odour : pungent

Flammable liquid and vapour. May be harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 5

Skin corrosion : Category 1A

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H303 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary statements :

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with local regulations.

Physical and chemical hazards

Flammable liquid and vapour.

Health hazards

May be harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

Environmental hazards

Not classified based on available information.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
acetic acid	64-19-7	> 99.5

4. FIRST AID MEASURES

General advice	:	Remove contaminated, soaked clothing immediately and dispose of safely Pay attention to own protection In any case show the physician the Safety Data Sheet
If inhaled	:	Move to fresh air. Keep at rest. Call a physician or poison control centre immediately.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
If swallowed	:	If conscious, drink plenty of water. If swallowed, do not induce vomiting - seek medical advice.
Most important symptoms and effects, both acute and delayed	:	Vapours may cause irritation to the eyes, respiratory system and the skin. Respiratory disorder
Notes to physician	:	Treat symptomatically In case of lung irritation, first treatment with dexametason aerosol (spray). In case of choking: gastroscopy inclusive of aspiration and acidosis compensation.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Foam Dry chemical Carbon dioxide (CO2) Water spray
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx)
Specific extinguishing methods	:	Cool containers/tanks with water spray.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	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 large quantities of concentrated spills or residues into surface water or sanitary sewer system.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Methods and materials for containment and 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 protection against fire and explosion : Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Ground/bond container and receiving equipment. In case of fire, use water spray.

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.

Avoidance of contact : Amines
Bases

Storage

Conditions for safe storage : Store locked up.
Keep in a dry, cool and well-ventilated place.
Keep container tightly closed in a dry and well-ventilated place.
Handle and open container with care

Materials to avoid : Keep away from amines.
Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
acetic acid	64-19-7	PC-TWA	10 mg/m3	GBZ 2.1-2007
		PC-STEL	20 mg/m3	GBZ 2.1-2007
		TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
Equipment should conform to EN 136 or EN 140 and EN 143.
Use NIOSH approved respiratory protection.

Filter type : Acidic gas/vapour type

Eye/face 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 and body protection	:	Impervious clothing
Hand protection		
Material	:	butyl-rubber
Break through time	:	480 min
Glove thickness	:	0.3 mm
Directive	:	Protective gloves complying with EN 374.
Manufacturer	:	Class 6
Remarks	:	Protective gloves
Protective measures	:	Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist. Use only in an area equipped with a safety shower. Ensure that eye flushing systems and safety showers are located close to the working place.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colourless
Odour	:	pungent
Odour Threshold	:	24.3 ppm
pH	:	2.4 Concentration: 60 g/l
Melting point/range	:	17 °C
Boiling point/boiling range	:	118 °C (1,013 hPa)
Flash point	:	39 °C Method: closed cup
Evaporation rate	:	0.97
Upper explosion limit	:	19.9 %(V)
Lower explosion limit	:	4 %(V)
Vapour pressure	:	21 hPa (25 °C) 77 hPa (50 °C)
Relative vapour density	:	2.07 (Air = 1.0)
Density	:	1.045 g/cm³ (25 °C)
Solubility(ies)		
Water solubility	:	miscible

Solubility in other solvents	:	miscible Solvent: Acetone miscible Solvent: Benzene miscible Solvent: Diethylether miscible Solvent: Ethanol soluble Solvent: Chloroform
Partition coefficient: n-octanol/water	:	log Pow: -0.170 measured data
Auto-ignition temperature	:	463 °C
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	1.056 mPa.s (25 °C)
Explosive properties	:	not applicable based on consideration of the structure
Oxidizing properties	:	not applicable based on consideration of the structure
Surface tension	:	27.1 mN/m, 25 °C
Molecular weight	:	60.05 g/mol

10. STABILITY AND REACTIVITY

Reactivity	:	Stable under normal conditions.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Keep away from fire, sparks and heated surfaces. Keep away from heat and sources of ignition. Take action to prevent static discharges.
Incompatible materials	:	Amines Bases
Hazardous decomposition products	:	Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

acetic acid:

Acute oral toxicity	:	LD50 (Rat): 3,310 mg/kg

Acute inhalation toxicity : LC50 (Rat): 40 mg/l
Exposure time: 4 h

Skin corrosion/irritation

Components:

acetic acid:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive

Serious eye damage/eye irritation

Components:

acetic acid:
Species: Rabbit
Result: Corrosive
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

acetic acid:
Result: Not a skin sensitizer.

Germ cell mutagenicity

Components:

acetic acid:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

: Test Type: Chromosome aberration test in vitro
Species: Chinese hamster cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: mammalian cells
Method: Mutagenicity (micronucleus test)
Result: negative
Test substance: Acetic anhydride

Carcinogenicity

Components:

acetic acid:

Result: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

acetic acid:

Effects on foetal development : Test Type: Pre-/postnatal development
Species: Rabbit
Application Route: Oral
Developmental Toxicity: NOAEL: 1,600 mg/kg bw/day
Method: Regulation (EC) No. 440/2008, Annex, B.31
Result: No evidence of reproductive and developmental toxicity

Test Type: Pre-/postnatal development
Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL: 1,600 mg/kg bw/day
Method: Regulation (EC) No. 440/2008, Annex, B.31
Result: No evidence of reproductive and developmental toxicity

Test Type: Pre-/postnatal development
Species: Mouse
Application Route: Oral
Developmental Toxicity: NOAEL: 1,600 mg/kg bw/day
Method: Regulation (EC) No. 440/2008, Annex, B.31
Result: No evidence of reproductive and developmental toxicity

Repeated dose toxicity

Components:

acetic acid:

Species: Rat, male
NOAEL: 290 mg/kg bw/d
Application Route: Oral
Exposure time: 8 weeks
Remarks: No adverse effects

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

acetic acid:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 300.82 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 300.82 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Skeletonema costatum (marine diatom)): > 300.82 mg/l Exposure time: 72 h Method: ISO 10253
Toxicity to microorganisms	:	EC3 (Pseudomonas putida): 850 mg/l Exposure time: 16 h

Persistence and degradability

Components:

acetic acid:

Biodegradability	:	Result: Readily biodegradable. Method: OECD Test Guideline 301C

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment	:	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

Components:

acetic acid:

Results of PBT and vPvB assessment	:	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of as hazardous waste in compliance with local and national regulations. Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 2789
Proper shipping name	:	ACETIC ACID, GLACIAL
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)

IATA-DGR

UN/ID No.	:	UN 2789
Proper shipping name	:	Acetic acid, glacial
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	Corrosive, Flammable Liquids
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 2789
Proper shipping name	:	ACETIC ACID, GLACIAL
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)
EmS Code	:	F-E, S-C
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

GB 6944/12268

UN number	:	UN 2789
Proper shipping name	:	ACETIC ACID, GLACIAL
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Identification of Major Hazard Installations for Dangerous Chemicals (GB 18218)

Category	Threshold quantity
Flammable liquids	5,000 Ton

16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date format : yyyy/mm/dd

Disclaimer

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