

Safety Data Sheet

1. IDENTIFICATION

Product Name:	Acetic acid
Recommended Use:	Solvent for resin, lacquers, wax, printing ink, adhesives, plastics and polishes agent. Raw material for used in the chemical industry such as paints, rubbers, plastic, cosmetics, pharmaceuticals, and dehydrate agents.
Supplier:	Global Chemie ASCC Limited
Street Address:	88/123 Moo 2 Bangpoo Industrial Estate (North), Phraek Sa Mai, Mueang Samutprakan, Samutprakan 10280
Telephone:	+66 2324 6888
Fax:	+66 2324 6898-99
Emergency phone:	+66 2324 6888 ext.320

2. HAZARDS IDENTIFICATION

Hazardous Nature

This product is classified as hazardous under GHS criteria

Hazardous Classification

Flammable liquids: Category 2

Acute toxic oral: Category 5

Skin Irritation: Category 1A

Serious eye damage: Category 1

Hazardous Statement

Flammable liquid and vapor

GHS Pictograms



Hazard Statements

H226: Flammable liquid and vapor.

H303: May be harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

Precautionary Statements

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

If on skin

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

If on ingestion

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

If inhaled

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eye

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If fire

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.

Signal Word Danger

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	UN No.	Proportion (%v/v)
Acetic acid	64-19-7	2789	>99.5

Molecular Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

4. FIRST AID MEASURES

Ingestion

Do not induce vomiting; Do not eat milk and castor oil, transport to nearest medical facility for additional treatment.

Eye Contact

Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.

Skin Contact

Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes and follow by washing with soap and water if available.

Inhalation

Remove to fresh air. If the victim has difficulty breathing or tightness of the chest, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

First Aid facilities

Provide eye baths and safety showers.

5. FIRE FIGHTING 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

Wear self-contained breathing apparatus and protective suit.

Other information

No data available.

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

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

7. HANDLING AND STORAGE

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.

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

National Exposure Standards

Occupational Exposure Limits

Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
PEL (long term)	10 ppm 25 mg/m3	SG OEL
PEL (short term)	15 ppm 37 mg/m3	SG OEL

ACETIC ACID

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Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TWA	10 ppm	ACGIH
STEL	15 ppm	ACGIH

Engineering Controls: Ventilation

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value.

Personal Protective Equipment

Respiratory Protection:

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Eye Protection: Chemical splash goggles (chemical monologues).

Skin/ Body Protection: Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

Hand Protection: Butyl rubber gloves, Nature rubber gloves, Neoprene rubber gloves, Nitrile rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of Measurement	Typical Value
Appearance	-	Colourless liquid
Odour	-	Pungent smell
pH	-	2.4 @ 60 g/l
Boiling point	°C	118
Melting point	°C	17
Flash point	°C	39 (Closed cup)
Flammability	-	Flammable
Autoignition Temperature	°C	463
Decomposition Temperature	°C	No data available
Lower/Upper Flammability Limits	%V	4.0-19.9
Density @ 25°C	g/cm ³	1.045
Specific Gravity @ 25°C	-	1.042
Viscosity @ 25°C	cSt	1.056 mPa*s
Vapor pressure	kPa	21 hPa @ 25°C 77 hPa @ 50°C
Vapor density	kPa (Air = 1)	2.07
Evaporation Rate	(n-Butyl acetate = 1)	0.97
Water Solubility	-	miscible
Solubility in other solvents Partition coefficient	(n-octanol/water)	miscible with, Ethanol, Diethyl ether, Acetone, Benzene, soluble in, Chloroform - log Pow: -0.17 (measured)

Property	Unit of Measurement	Typical Value
Coefficient of Thermal Expansion	per Deg °C	No data available
Surface Tension @ 25°C	mN/m	27.10
Viscosity @ 25°C	mPa.s	1.056
Particle Characteristic	-	No data available

The values listed are indicative of this product’s physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILTY AND REACTIVITY

Chemical Stability
No decomposition if stored and applied as directed.

Reactivity
Stable under normal condition.

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 reactions
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

- ♦ LD₅₀ Acute oral toxicity : 3,310 mg/kg (rat)
- ♦ LC₅₀ Acute Inhalation Toxicity : 40 mg/L /4 hours (rat)

Skin corrosion/irritation
Acetic acid
Species: Rabbit Method: OECD Test Guideline 404
Result: Corrosive

Serious eye damage/eye irritation
Acetic acid
Species: Rabbit Method: OECD Test Guideline 405
Result: Corrosive

Respiratory or skin sensitisation
Acetic acid
Result: Not a skin sensitizer.

Germ cell mutagenicity
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

Carcinogenic:

No evidence of carcinogenicity

Reproductive toxicity

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

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

Acute fish toxicity

LC50: > 300.82 mg/l (96h)

Species:

Oncorhynchus mykiss (rainbow trout)

Method OECD Test Guideline 203

Acute daphnia toxicity

EC50: > 300.82 mg/l (48h)

Species:

Daphnia magna

Method OECD Test Guideline 202

Toxicity to algae	EC50: > 300.82 mg/l (72h)
Species:	marine diatom
	Method ISO 10253
Toxicity to microorganisms (bacteria)	EC3 (16h): 850 mg/l (16h)
Species:	Pseudomonas putida
Biodegradation	Readily biodegradable
Method	OECD 301 C
Bioaccumulative potential	
No data available	
Mobility in soil	
No data available	
Other potential hazards	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Product information

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

Road and Rail Transport		Marine Transport		Air Transport	
UN. Number	2789	UN. Number	2789	UN. Number	2789
Class/Item	3 / 6.1	Class/Item	3 / 6.1	Class/Item	3 / 6.1
Hazard Symbol	Flammable Liquid Corrosive	Hazard Symbol	Flammable Liquid Corrosive	Hazard Symbol	Flammable Liquid Corrosive
Proper Shipping Name	Acetic acid	Proper Shipping Name	Acetic acid	Proper Shipping Name	Acetic acid
Packing Group	II	Packing Group	II	Packing Group	II
		Marine Pollutant	No		

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

National Fire Protection Association : No data available
(USA)

SDS Distribution : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty of guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Prepared By : Quality Control Department / Global Chemie ASCC Limited

Abbreviations:

AICS: Australian Inventory of Chemical Substances
CAS Number: Chemical Abstracts Number
IARC: International Agency for Research on Cancer
N/A: not available
NOHSC: National Occupational Health and Safety
Council GHS: Global Harmonized System

References:

- Supplier Material Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (October 18)
- <http://hsis.ascc.gov.au/SearchHS.aspx> (October 18)
- Ecotoxicology data: http://cfpub.epa.gov/ecotox/quick_query.htm (October 18)
- *Sax's Dangerous Properties of Industrial Materials*, Richard J. Lewis Snr., pub. Canada (2000)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. No warranty and guarantee are expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product for further information, please contact Global Chemie ASCC Limited.