Science Company ™

MSDS

Material Safety Data Sheet

1. PRODUCT and COMPANY IDENTIFICATION

Product: Acetic Acid, 0.1-1N, 0.1-10%
Product Code(s): NC-2271, A1003, A1006, A1015, A1004, A1005,
A1007, A1040, A1060
Synonyms: Mixture
Distributor: Science Company
95 Lincoln St Denver CO 80203
Ph: (303)777-3777 Fax: (303)777-3331

IN CASE OF EMERGENCY
24 HOUR CONTACT TELEPHONE
CHEM-TEL: (800)255-3924
All non-emergency questions may be directed to customer service (303)777-3777

2. COMPOSITION and INFORMATION on INGREDIENTS

Ingredients	CAS#	Chemical Formula	Formula Weight	Hazardous	% by Weight
Acetic acid	64-19-7	CH_3COOH	60.05	Yes	0.1-10
Water	7732-18-5	H_2O	18.015	No	90-99.9

3. HAZARDS IDENTIFICATION

Emergency Overview:
CAUTION! MAY CAUSE IRRITATION OR BURNS TO SKIN, EYES, RESPIRATORY TRACT AND/OR GASTROINTESTINAL TRACT. MAY BE HARMFUL OR FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.

SAFETY RATINGS: Health: 1, Slight — Reactivity: 0, None
Flammability: 0, None — Contact: 2, Moderate
Protective Equipment: Goggles, Lab Coat or Apron and Gloves.
Storage Code: Green, General storage

Potential Health Effects:
INHALATION:
May be harmful. May cause irritation to nasal membranes and respiratory tract. Prolonged exposure could lead to chronic bronchial infections.
INGESTION:
May be harmful. May cause nausea, vomiting, headache and diarrhea. Prolonged exposure could cause ulceration of tissue.
SKIN CONTACT:
May cause irritation, redness and/or burns.
EYE CONTACT:
May cause irritation. Prolonged exposure could cause tissue damage and severe irritation.
POTENTIAL ACUTE HEALTH EFFECTS:
MUTAGETIC EFECTS: Mutagenic for mammalian somatic cells (Acetic Acid). Mutagenic for bacteria and/or yeast (Acetic Acid).
POTENTIAL CHRONIC HEALTH EFFECTS:
No information is available in our database regarding the effects of repeated or chronic exposure of this material in humans.
MEDICAL CONDITIONS GENERALLY AGGRAVATED by EXPOSURE:
Repeated or prolonged exposure may produce target organs damage.

4. FIRST AID MEASURES

INHALATION:
Remove to fresh air. If symptoms occur, get medical attention.
INGESTION:
DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
SKIN CONTACT:
Wash with mild soap and water. If irritation develops, get medical attention.
EYE CONTACT:
Check for and remove contact lens. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

FIRE:

Non-flammable.

EXPLOSION:

No information available.

SPECIAL REMARKS ON EXPLOSION HAZARD:

Acetic acid vapors may form explosive mixtures with air. Reactions between Acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, potassium permanganate, sodium peroxide, hydrogen peroxide and phosphorous trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110^0C.

FIRE EXTINGUISHING MEDIA:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire-exposed containers cool.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Use non sparking tools and equipment. Pick up and place in a suitable container for reclamation or disposal. If necessary, neutralize with dilute solution of Sodium Carbonate. Do not use combustible materials, such as sawdust.

7. HANDLING and STORAGE

Store in a cool, dry, ventilated area, away from flame, sources of ignition and heat. Keep containers tightly closed and upright. Protect from physical damage. Keep out of direct sunlight and separate from incompatible materials. Containers of this material may be hazardous when empty since they retain product residues (vapor, liquids); observe all warnings and precautions listed for the product. Storage and use areas should be non-smoking. Wash thoroughly after handling.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

-OSHA Permissible Exposure Limit (PEL):
Acetic acid, glacial: 25 mg/m^3 (TWA) Ceiling
-ACGIH Threshold Limit Value (TLV):
Acetic acid, glacial: 15 ppm (TWA) Ceiling

VENTILATION SYSTEM:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

PERSONAL RESPIRATORS (NIOSH) APPROVED:

If the exposure limit is exceeded and engineering controls are not feasible, a full face-piece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.

SKIN PROTECTION:

Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.

EYE PROTECTION:

Use chemical safety glasses or goggles. Maintain approved eye wash station in work area.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid.
ODOR:	Pungent
SOLUBILITY:	Miscible in water
SPECIFIC GRAVITY:	No information available.
pH:	Acidic.
% VOLATILES by VOLUME @ 21^{o}C (70^{o}F):	No information available.
BOILING POINT:	No information available.
MELTING POINT:	No information available.
VAPOR DENSITY (Air =1):	No information available.
VAPOR PRESSURE (mm Hg):	No information available.
EVAPORATION RATE (BuAc=1):	No information available.

10. STABILITY and REACTIVITY

STABILITY:
Stable under ordinary conditions of use and storage.
HAZARDOUS DECOMPOSITION PRODUCTS:
No information available.
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATIBILITIES:
Acetic Acid, Glacial: Reacts violently with strong oxidizers, acetaldehyde and acetic anhydride. Material my react with metals, strong bases, amines, carbonates, hydroxides, phosphates, many oxides, cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, ammonium nitrate, ammonium trisulfate, chlorine trifluoride, chlorosulfonic acid, perchloric acid, permanganates, xylene, oleum, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenedimine, ethylene imine.
CONDITIONS to AVOID:
Heat, flames, ignition sources, sunlight and incompatible materials.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:
Oral LD50:33100 mg/kg (Rat); (Calculated value for mixture)
Dermal LD50: 10600 mg/kg (Rabbit); Calculated for value of mixture) Mutagenic for mammalian somatic cells (Acetic Acid). Mutagenic for bacteria and/or yeast (Acetic Acid).

Cancer Lists	NTP Carcinogen		
Ingredient	Known	Anticipated	IARC Category
Acetic acid, glacial	No	No	None

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:
Acetic Acid, Glacial: If released to the atmosphere, it is degraded in the vapor phase by reaction with photochemically produced hydroxyl radicals (estimated typical half-life of 26.7 days). If released to water or soil, acetic acid will bio-degrade readily. Acetic acid shows no potential for biological accumulation or food chain contamination. BCF estimated at less than 1.
ENVIRONMENTAL TOXICITY:
Acetic Acid, Glacial: EC50: (wheat fumigation) = 23.3 mg/m3/2-hr, effect; leaf injury. LC50: (shrimp) - 100-300 mg/1/48-hr. LC50: (flathead minnow) - 88 mg/1/96-hr. This material may be toxic to aquatic life.

13. DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be handled as potentially hazardous waste and disposed of or incinerated at an approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

TRANSPORT (Land, DOT)
Not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Acetic acid, glacial (64-19-7)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

	-Canada-			
Ingredient	Korea	DSL	NDSL	Phil
Acetic acid, glacial (64-19-7)	Yes	Yes	No	Yes

Federal, State & International Regulations – Part 1

	-SARA 302-		-SARA 313-	
Ingredient	TQ	TPQ	List	Chemical Catgl
Acetic acid, glacial (64-19-7)	No	No	No	No

Federal, State & International Regulations – Part 2

Ingredient	RCRA CERCLA	TSCA 261.33	8 (d)
Acetic acid, glacial (64-19-7)	5000	No	No

Chemical Weapons Convention: No TSCA 12 (b): No CDTA: No SARA 311/312 Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Mixture/Liquid)

Australian Hazchem Code: No information available
Poison Schedule: No information available

16. OTHER INFORMATION

PRODUCT USE:
Laboratory Reagent.

DISCLAIMER:
The Science Company provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. THE SCIENCE COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS, ACCORDINGLY, THE SCIENCE COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.