

rev: 9/30/1997

7242

DATE: 09/15/99 ACCT: 580773016 PAGE: 1  
 INDEX: H92574477 CAT NO: SA361 PO NBR: 1274913PHL

## \*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

Acetic Acid Solution 1N  
 00121

6% in H<sub>2</sub>O

## \*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Acetic Acid Solution 1N

Catalog Numbers:

S70041, S70048-3, S80238, S80238-2, S802383-2, NC9353946, NC9499928, NC9501319, S70041-1, S802381A, SA36 1, SA361

Synonyms:

None

Company Identification: Fisher Scientific  
 1 Reagent Lane  
 Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

## \*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
64-19-7	Acetic acid	6.0	200-580-7
7732-18-5	Water	94.0	231-791-2

## \*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

## EMERGENCY OVERVIEW

Appearance: colourless.

Danger! May cause allergic skin reaction. Corrosive. Eye contact may result in permanent eye damage. Causes severe eye and skin burns. Causes severe digestive and respiratory tract burns.

Target Organs: None.

## Potential Health Effects

Eye:

Causes severe eye irritation. Causes eye burns.

Skin:

Causes severe skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion:

May cause severe and permanent damage to the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock.

Inhalation:

Effects may be delayed. Causes respiratory tract irritation.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause erosion of teeth.

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Treat symptomatically and

Antidote:

No specific antidote exists.

## \*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

General Information:

Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Reacts with most metals to form highly flammable hydrogen gas which can form explosive mixtures with air.

Extinguishing Media:

DATE: 09/15/99 ACCT: 580773016 PAGE: 2  
 INDEX: H92574477 CAT NO: SA361 PO NBR: 1274913PHL

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.  
 Autoignition Temperature: Not applicable.  
 Flash Point: Not applicable.  
 NFPA Rating: Not published.  
 Explosion Limits, Lower: Not available.  
 Upper: Not available.

## \*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container.

## \*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get on skin or in eyes. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances.

## \*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

## Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Acetic acid	10 ppm : 25 mg/m <sup>3</sup> ; 15 ppm STEL	10 ppm TWA; 25 mg/m <sup>3</sup> TWA 50 ppm IDLH	10 ppm TWA; 25 mg/m <sup>3</sup> TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs:

Acetic acid:  
10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Water:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## \*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Liquid  
 Appearance: colourless  
 Odor: None reported  
 pH: 2.4  
 Vapor Pressure: Not available.  
 Vapor Density: Not available.  
 Evaporation Rate: Not available.  
 Viscosity: Not available.  
 Boiling Point: Not available.  
 Freezing/Melting Point: Not available.  
 Decomposition Temperature: Not available.  
 Solubility: Not available.  
 Specific Gravity/Density: Not available.  
 Molecular Formula: CH<sub>3</sub>CO<sub>2</sub>H  
 Molecular Weight: 60.0268

## \*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability:

Stable.  
Conditions to Avoid:  
Incompatible materials, excess heat.  
Incompatibilities with Other Materials:  
Acetic acid is incompatible with acetaldehyde, 2-aminoethanol, ammonium nitrate, bromine pentafluoride, chlorine trifluoride, chlorosulfonic acid, chromic acid, chromic anhydride + acetic anhydride, diallyl methyl carbinol + ozone, ethylene diamine, ethyleneimine, hydrogen peroxide, nitric acid, nitric acid + acetone, oleum, perchloric acid, permanganates, phosphorus isocyanate, phosphorus trichloride, potassium hydroxide, potassium-t-butoxide, sodium hydroxide, sodium peroxide, and xylene. See NFPA Fire Protection Guide for specifics.

Hazardous Decomposition Products:  
Carbon monoxide, carbon dioxide.  
Hazardous Polymerization: Has not been reported.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:

CAS# 64-19-7: AF1225000  
CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 64-19-7: Inhalation, mouse: LC50 = 5620 ppm/1H; Oral, rat: LD50 = 3310 mg/kg; Skin, rabbit: LD50 = 1060 mg/kg.  
CAS# 7732-18-5: Oral, rat: LD50 = 90 mL/kg.

Carcinogenicity:

Acetic acid -  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Water  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:

No information available.

Teratogenicity:

Effects on Newborn: behavioral, orl-rat TDLo=700 mg/kg for acetic acid.

Reproductive Effects:

Fertility: male index, itt-rat TDLo=400 mg/kg for acetic acid.

Neurotoxicity:

No information available.

Mutagenicity:

No information available.

Other Studies:

None.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Ecotoxicity:

Acetic acid: Bluegill (fresh water) TLM=75 ppm/96H Goldfish (fresh water) TLM=100 ppm/96H Shrimp (aerated water) LC50=100-330 ppm/48H

Environmental Fate:

Acetic acid spreads on soil surface and penetrates at rate dependent on soil type and water content. It readily degrades in water and shows little potential for bioaccumulation.

Physical/Chemical:

No information available.

Other:

None.

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT

No information available

IMO

No information available.

IATA

No information available.

RID/ADR

No information available.

Canadian TDG

No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL

TSCA

CAS# 64-19-7 is listed on the TSCA inventory.  
CAS# 7732-18-5 is listed on the TSCA inventory.  
Health & Safety Reporting List  
None of the chemicals are on the Health & Safety Reporting List.  
Chemical Test Rules  
None of the chemicals in this product are under a Chemical Test Rule.  
Section 12b

None of the chemicals are listed under TSCA Section 12b.  
TSCA Significant New Use Rule  
None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)  
CAS# 64-19-7: final RQ = 5000 pounds (2270 kg)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 64-19-7: acute, chronic, flammable.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

Clean Water Act:

CAS# 64-19-7 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority

Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants

under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous

by OSHA.

STATE

Acetic acid can be found on the following state right to know lists:

California, New Jersey, Florida, Pennsylvania, Minnesota,

Massachusetts.

Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 64-19-7: 1

CAS# 7732-18-5: No information available.

Canada

CAS# 64-19-7 is listed on Canada's DSL/NDSL List.

CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of E.

CAS# 64-19-7 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 64-19-7: OEL-AUSTRALIA:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m

3)

OEL-AUSTRIA:TWA 10 ppm (25 mg/m3)

OEL-BELGIUM:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3)

OEL-CZECHOSLOVAKIA:TWA 25 mg/m3;STEL 50 mg/m3

OEL-DENMARK:TWA 10 ppm (25 mg/m3)

OEL-FINLAND:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3);Skin

OEL-FRANCE:STEL 10 ppm (25 mg/m3)

OEL-GERMANY:TWA 10 ppm (25 mg/m3)

OEL-HUNGARY:TWA 10 mg/m3;STEL 20 mg/m3

OEL-INDIA:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3)

OEL-JAPAN:TWA 10 ppm (25 mg/m3)

OEL-THE NETHERLANDS:TWA 10 ppm (25 mg/m3)

OEL-THE PHILIPPINES:TWA 10 ppm (25 mg/m3)

OEL-POLAND:TWA 5 mg/m3

OEL-RUSSIA:TWA 10 ppm;STEL 5 mg/m3;Skin

OEL-SWEDEN:TWA 10 ppm (25 mg/m3);STEL 15 ppm (35 mg/m3)

OEL-SWITZERLAND:TWA 10 ppm (25 mg/m3);STEL 20 ppm (50 mg/m3)

OEL-THAILAND:TWA 10 ppm (25 mg/m3)

OEL-TURKEY:TWA 10 ppm (25 mg/m3)

OEL-UNITED KINGDOM:TWA 10 ppm (25 mg/m3);STEL 15 ppm (35 mg/m3)

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 5/09/1995 Revision #6 Date: 9/30/1997

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.