

DATE: 01/28/99
INDEXT: D90279502

ACCT: 888235001
CAT NO: A214

PO NBR: UNI-92619

PAGE: 1

**** MATERIAL SAFETY DATA SHEET ****

Acetonitrile
00170

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

MSDS Name: Acetonitrile

Catalog Numbers:

AC149525000, AC167650040, AC167655000, AC423250040, AC423250200, S70092ACS, S70092HPLC, A21 1, A21 20, A21 4, A21 SS115, A21-1, A21-20, A21-4, A21-500, A211, A2120, A21200, A2120LC, A214, A21RB115, A21RB19, A21RB200, A21RB50, A21RS115, A21RS200, A21RS28, A21SK-4, A21SS 200, A21SS 30, A21SS 50, A21SS115, A21SS200, A21SS30, A21SS50, A24-4, A996 1, A996 4, A996-1, A996-4, A9961, A9964, A9964LC, A9964LOT004, A9964LOT005, A9964LOT006, A9964LOT008, A996RS115, A996RS200, A996RS28, A996RS50, A996SS115, A996SS200, A996SS28, A996SS50, A998 1, A998 4, A998-1, A998-4, A9981, A9984, A9984LC, A9984LOT002, A998RS115, A998RS200, A998RS28, A998RS50, A998S 115, A998S 530, A998S 550, A998SK 1, A998SK 4, A998SK-1, A998SK-4, A998SK1, A998SK4, A998SK4001, A998SK4LC, A998SS 200, A998SS-11, A998SS-115, A998SS-20, A998SS-200, A998SS-30, A998SS-50, A998SS115, A998SS200, A998SS28, A998SS30, A998SS50, A999 4, A999-4, A9994, BP1165 50, BP1165-50, BP116550, BP1170 4, BP1170 4002, BP1170 4004, BP1170 4005, BP1170 4006, BP1170 4007, BP1170 4008, BP1170 4009, BP1170 4010, BP1170-4, BP11704, BP11704002, BP11704004, BP11704005, BP11704006, BP11704007, BP11704008, BP11704009, BP11704010, BP1170RS115, BP1170RS200, BP1170RS28, BP1170RS50, BP1170SS 115, BP1170SS 200, BP1170SS 30, BP1170SS 50, BP1170SS-11, BP1170SS-20, BP1170SS-50, BP1170SS-50, BP1170SS115, BP1170SS200, BP1170SS28, BP1170SS30, BP1170SS50, BP1174OLC, BP1406LC, BW1140RT50, CRNBP11704, FLA21RB-115, FLA21RB-19, FLA21RB-200, FLA21RB-50, FLA21RS-115, FLA21RS-200, FLA21RS-28, FLA21RS-50, O1034 500, O1034-500, O1034500

Synonyms:

Cyanomethane, Ethanenitrile, Ethyl Nitrile, Methanecarbonitrile, Methyl Cyanide.

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#
75-05-8	Acetonitrile	99.0	200-835-2

Hazard Symbols: T F
Risk Phrases: 11 23/24/25

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear, colorless. Flash Point: 6 deg C.

Warning! May be harmful if absorbed through the skin. Flammable liquid. May cause central nervous system depression. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause liver and kidney damage. May cause pulmonary edema. May cause reproductive and fetal effects.

Target Organs: Kidneys, central nervous system, liver, red blood cells.

Potential Health Effects

Eye:

May cause moderate eye irritation. Vapors may cause eye irritation.

Skin:

May cause skin irritation. May be harmful if absorbed through the skin. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration.

Ingestion:

May cause irritation of the digestive tract. May cause effects similar to those for inhalation exposure.

Inhalation:

Harmful if inhaled. Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. May cause liver and kidney damage. Vapors may cause dizziness or suffocation. May cause nausea, dizziness, and headache. Inhalation may lead to dizziness, weakness, and drowsiness, leading to stupor, unconsciousness, and even death. Inhalation may lead to hematemesis, convulsions, shock, coma, and possible death.

Chronic:

Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Animal studies have reported that fetal

DATE: 01/28/99
INDEXT: D90279502

ACCT: 888235001
CAT NO: A214

PO NBR: UNI-92619

PAGE: 2

effects/abnormalities may occur when maternal toxicity is seen.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

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

Skin:

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

Ingestion:

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 breathing is difficult, give oxygen.

Notes to Physician:

Exposure should be treated as a cyanide poisoning. Effects may be delayed.

Antidote:

Always have a cyanide antidote kit on hand when working with cyanide compounds. Get medical advice to use.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Combustion generates toxic fumes. Use water spray to keep fire-exposed containers cool. Flammable Liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature: 524 deg C (975.20 deg F)

Flash Point: 6 deg C (42.80 deg F)

NFPA Rating: health-2; flammability-3; reactivity-0

Explosion Limits, Lower: 4.4 vol %

Upper: 16.00 vol %

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

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

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. 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
---------------	-------	-------	-------------------

Acetonitrile 40 ppm ; 67 20 ppm TWA; 34 40 ppm TWA; 70
mg/m3; 60 ppm mg/m3 TWA 500 mg/m3 TWA
STEL; 101 mg/m3 ppm IDLH
STEL

OSHA Vacated PELs:

Acetonitrile:
40 ppm TWA; 70 mg/m3 TWA

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 protective 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: clear, colorless
Odor: sweetish odor - aromatic odor
pH: Not available
Vapor Pressure: 73 mm Hg
Vapor Density: 1.42 (Air=1)
Evaporation Rate: 5.79 (Butyl acetate=1)
Viscosity: 0.36 cP 20 deg
Boiling Point: 82 deg C @ 760.00mm Hg
Freezing/Melting Point: -50 deg C
Decomposition Temperature: Not available.
Solubility: soluble
Specific Gravity/Density: .7810g/cm3
Molecular Formula: C2H3N
Molecular Weight: 41.04

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources.

Incompatibilities with Other Materials:

Chlorine fluoride, fluorine, 2-cyano-2-propyl nitrate, dinitrogen tetroxide, indium, diphenyl sulfoxide, trichlorosilane, n-fluoro compounds, iron (III) perchlorate, lanthanide, nitric acid, perchloric acid, sulfuric acid, sulfur trioxide

Hazardous Decomposition Products:

Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

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

RTECS#:

CAS# 75-05-8: AL7700000

LD50/LC50:

CAS# 75-05-8: Inhalation, mouse: LC50 =2693 ppm/1H; Inhalation, rabbit: LC50 =2828 ppm/4H; Inhalation, rat: LC50 =7551 ppm/8H; Oral, mouse: LD50 = 269 mg/kg; Oral, rabbit: LD50 = 50 mg/kg; Oral, rat: LD50 = 2730 mg/kg; Skin, rabbit: LD50 = 1250 mg/kg.

Carcinogenicity:

Acetonitrile -

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Epidemiology:

No information available.

Teratogenicity:

Embryo or Fetus: stunted fetus, ihl-hamster TCLo=8000 ppm/1H.
Specific Developmental Abnormalities: musculoskeletal, orl-hamster TCLo=300 mg/kg.

Reproductive Effects:

Fertility: post-implantation mortality, orl-hamster TDLo=400 mg/kg and ihl-hamster TCLo=5000 ppm/1H.

Neurotoxicity:

No information available.

Mutagenicity:

Sex Chromosome Loss/Non-disjunction: S. cerevisiae 47600 ppm.

Other Studies:

None.

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

Ecotoxicity:

Fathead minnow (hard water) TLm=1150 ppm/24H.

Environmental Fate:

No information reported.

Physical/Chemical:

No information available.

Other:

None.

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

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants:

None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: CAS# 75-05-8: waste number U003

(Ignitable waste; Toxic waste).

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

US DOT

Shipping Name: ACETONITRILE

Hazard Class: 3

UN Number: UN1648

Packing Group: II

IMO

No information available.

IATA

No information available.

RID/ADR

No information available.

Canadian TDG

Shipping Name: ACETONITRILE

Hazard Class: 3(6.1)

UN Number: UN1648

Other Information: FLASHPOINT 6 C

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

US FEDERAL

TSCA

CAS# 75-05-8 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 75-05-8: Effective Date: October 4, 1982; Sunset Date: October 4,

1992

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# 75-05-8: final RQ = 5000 pounds (2270 kg)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 75-05-8: acute, chronic, flammable.

Section 313

This material contains Acetonitrile (CAS# 75-05-8, 99.0%) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 75-05-8 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances 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

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

California, New Jersey, Florida, Pennsylvania, Minnesota,

Massachusetts.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

DATE: 01/28/99 ACCT: 888235001

INDEX: D90279502 CAT NO: A214 PO NBR: UNI-92619

European Labeling in Accordance with EC Directives

Hazard Symbols: T F
Risk Phrases:R 11 Highly flammable.
R 23/24/25 Toxic by inhalation, in contact with skin
and if swallowed.

Safety Phrases:

S 16 Keep away from sources of ignition - No
smoking.
S 27 Take off immediately all contaminated clothing.
S 45 In case of accident or if you feel unwell, seek
medical advice immediately (show the label where
possible).

WGK (Water Danger/Protection)

CAS# 75-05-8: 2

Canada

CAS# 75-05-8 is listed on Canada's DSL/NDSL List.
This product has a WHMIS classification of B2, D1B, D2B.
CAS# 75-05-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 75-05-8: OEL-ARAB Republic of Egypt:TWA 40 ppm (70 mg/m3);Skin
OEL-AUSTRALIA:TWA 40 ppm (70 mg/m3);STEL 60 ppm ;Skin. OEL-AUSTRIA:TW
A 40 ppm (70 mg/m3). OEL-BELGIUM:TWA 40 ppm (67 mg/m3);STEL 60 ppm (10
mg/m3);Skin. OEL-DENMARK:TWA 40 ppm (70 mg/m3);STEL 60 ppm (10 mg/m3)
OEL-FINLAND:TWA 40 ppm (70 mg/m3);STEL 60 ppm (10 mg/m3). OEL-FRANCE
:TWA 40 ppm (70 mg/m3). OEL-GERMANY:TWA 40 ppm (70 mg/m3). OEL-HUNGARY
:TWA 50 mg/m3;STEL 100 mg/m3;Skin JAN9. OEL-THE NETHERLANDS:TWA 40 ppm
(70 mg/m3). OEL-THE PHILIPPINES:TWA 40 ppm (70 mg/m3). OEL-RUSSIA:STE
L 10 mg/m3. OEL-SWITZERLAND:TWA 40 ppm (70 mg/m3);STEL 80 ppm ;Skin. O
EL-TURKEY:TWA 40 ppm (70 mg/m3). OEL-UNITED KINGDOM:TWA 40 ppm (70 mg/
m3);STEL 60 ppm. 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: 1/04/1995 Revision #71 Date: 4/23/1998

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 Fisher 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 Fisher has been advised of the possibility of such damages.
