



SAFETY DATA SHEET

Creation Date 16-Jun-2009

Revision Date 09-Nov-2010

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Description:

Acetonitrile

Cat No.

A/0626/15; A/0626/15X; A/0626/17; A/0626/17G; A/0626/17X; A/0626/21; A/0626/25SS;
A/0626/27SS; A/0626/27Z; A/0626/34V; A/0626/99UCB; A/0626/99V; A/0626/99W;
A/0626/AC21; A/0626/DH25; A/0626/PB17; A/0626/PB17X; A/0626/PK4

Synonyms

AN; Methyl cyanide

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

Details of the supplier of the safety data sheet

Company

Fisher Scientific UK
Bishop Meadow Rd
Loughborough, Leicestershire, Great Britain
LE115RG
Tel: 01509 231166

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

Chemtrec US: (800) 424-9300

Chemtrec EU: (202) 483-7616 Tel: 01509 231166

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Gas	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious Eye Damage/Eye Irritation	Category 2A
Flammable liquids.	Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R phrases mentioned in this Section, see Section 16

Symbol(s)

F - Highly flammable

Xn - Harmful

R - phrase(s)

R11 - Highly flammable

R36 - Irritating to eyes

Risk Combination Phrases

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R-code(s)

F;R11 -C;R35 - Xi;R36 - Xn;R20/21/22

2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P240 - Ground/Bond container and receiving equipment

Other Hazards

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
Acetonitrile 75-05-8	EEC No. 200-835-2	99	75-05-8	F;R11 Xn;R20/21/22 Xi;R36	Eye Irrit. 2 (H319) - Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Flam Liq. 2 (H225)	

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures

General Advice

Immediate medical attention is required Show this safety data sheet to the doctor in attendance
If symptoms persist, call a physician

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes Immediate medical attention
is required

Ingestion

Do not induce vomiting Call a physician or Poison Control Center immediately

Inhalation

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation
if victim ingested or inhaled the substance; induce artificial respiration with a respiratory
medical device Call a physician or Poison Control Center immediately

Protection of First-aiders

Notes to Physician

Remove all sources of ignition Use personal protective equipment
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible
perforation of stomach or esophagus should be investigated. Do not give chemical antidotes.
Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with
moist rales, frothy sputum, and high pulse pressure Treat symptomatically

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam Cool closed containers exposed to fire with water spray

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Flammable Vapors may form explosive mixtures with air Vapors may travel to source of ignition and flash back Containers may explode
when heated

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective
gear Thermal decomposition can lead to release of irritating gases and vapors

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear self-contained breathing apparatus and protective suit Remove all sources of ignition Evacuate personnel to safe areas Keep
people away from and upwind of spill/leak Take precautionary measures against static discharges

Environmental precautions

Should not be released into the environment

Methods and material for containment and cleaning up

Remove all sources of ignition Soak up with inert absorbent material Keep in suitable and closed containers for disposal Use spark-
proof tools and explosion-proof equipment Take precautionary measures against static discharges

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood Use explosion-proof equipment Use only non-sparking tools Keep away from open flames, hot surfaces and sources of ignition Take precautionary measures against static discharges Do not get in eyes, on skin, or on clothing Do not breathe vapors or spray mist

Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place Keep away from heat and sources of ignition Protect from moisture Flammables area

Specific End Uses

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure limits

Component

Acetonitrile

European Union	The United Kingdom	France	Belgium	Spain
		VME: 40 ppm VME: 70 mg/m ³	TWA: 34 mg/m ³ TWA: 20 ppm	VLA-ED: 40 ppm VLA-ED: 68 mg/m ³

Component

Acetonitrile

Italy	Portugal	The Netherlands	Finland	Denmark
TWA: 20 ppm TWA: 35 mg/m ³	TWA: 20 ppm	TWA: 34 mg/m ³	TWA: 34 mg/m ³ TWA: 20 ppm STEL: 68 mg/m ³ STEL: 40 ppm	TWA: 70 mg/m ³ TWA: 40 ppm

Component

Acetonitrile

Austria	Switzerland	Poland	Norway	Ireland
STEL: 160 ppm STEL: 280 mg/m ³ MAK: 70 mg/m ³ MAK: 40 ppm	STEL: 40 ppm STEL: 68 mg/m ³ MAK: 20 ppm MAK: 34 mg/m ³	NDSch: 140 mg/m ³ NDS: 70 mg/m ³	TWA: 30 ppm TWA: 50 mg/m ³	TWA: 40 ppm TWA: 70 mg/m ³ STEL: 60 ppm STEL: 105 mg/m ³ Skin

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Use only under a chemical fume hood Use explosion-proof electrical/ventilating/lighting/equipment Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection

Safety glasses with side-shields

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

When using, do not eat, drink or smoke Provide regular cleaning of equipment, work area and clothing

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colorless
odor	aromatic
pH	No information available.
Vapor Pressure	97 mbar @ 20 °C
Vapor Density	1.42 (Air = 1.0)
Viscosity	0.36 cP at 20 °C
Boiling Point/Range	81 - 82°C / 177.8 - 179.6°F@ 760 mmHg
Melting Point/Range	-46°C / -50.8°F
Flash Point	2°C / 35.6°F
Explosion Limits	
Lower	3 vol %
Upper	16 vol %
Evaporation Rate	(Butyl Acetate = 1.0)
Water Solubility	miscible
Specific Gravity	0.781
Molecular Formula	C2 H3 N
Molecular Weight	41.04

10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available

Hazardous Reactions . No information available.

Conditions to Avoid

Incompatible products, Keep away from open flames, hot surfaces and sources of ignition, Exposure to moisture.

Incompatible Materials

Strong oxidizing agents, Strong acids, Reducing agents.

Hazardous Decomposition Products

Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information
 2460mg/kg rat estimated
 2000 mg/kg rat estimated
 99999 mg/L (mist) (dust) mg/m³ estimated
 7551 ml/m³ (vapor) estimated

Component Information

Component

Acetonitrile

LD50 Oral	LD50 Dermal	LC50 Inhalation
2460 mg/kg (Rat)	2000 mg/kg (Rabbit)	7551 ppm (Rat) 8 h

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

Mutagenic effects have occurred in experimental animals.

Reproductive Effects

Experiments have shown reproductive toxicity effects on laboratory animals

Developmental Effects

Developmental effects have occurred in experimental animals

Teratogenicity

Teratogenic effects have occurred in experimental animals.

Target Organs

Central nervous system (CNS) Respiratory system Kidney Liver Eyes Skin

Other Adverse Effects

Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information

Endocrine Disruptor Information

None known

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Acetonitrile		1850 mg/L LC50 96 h 1650 mg/L LC50 96 h 1000 mg/L LC50 96 h 1600-1690 mg/L LC50 96 h	EC50 = 28000 mg/L 48 h EC50 = 73 mg/L 24 h EC50 = 7500 mg/L 15 h	5838 mg/L EC50 = 18 h

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Component	log Pow
Acetonitrile	0

Mobility in soil

Results of PBT and vPvB assessment

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	1648
Hazard Class	3
Packing Group	II
Proper Shipping Name	ACETONITRILE

ADR

UN-No	1648
Hazard Class	3
Packing Group	II
Proper Shipping Name	ACETONITRILE

IATA

UN-No	1648
Hazard Class	3
Packing Group	II
Proper Shipping Name	ACETONITRILE

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Acetonitrile	200-835-2	-		T	X	-	X	X	X	X	KE-00067 X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory Lists

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

16. OTHER INFORMATION

Text of R phrases mentioned in Section 2-3

R11 - Highly flammable

R36 - Irritating to eyes

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

16. OTHER INFORMATION

Revision Date 09-Nov-2010

Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet