SAFETY DATA SHEET

1. Identification

Product identifier Cythioate Solution

Other means of identification

Item S-11551A1

Recommended use For Laboratory Use Only

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Chem Service, Inc.
Address 660 Tower Lane

West Chester, PA 19380

United States

Telephone Toll Free 800-452-9994

Direct 610-692-3026

Website www.chemservice.com
E-mail info@chemservice.com

Emergency phone number Chemtrec US 800-424-9300

Chemtrec outside US +1 703-527-3887

2. Hazard(s) identification

Physical hazardsFlammable liquidsCategory 2Health hazardsAcute toxicity, oralCategory 3Acute toxicity, dermalCategory 3Acute toxicity, inhalationCategory 3Serious eye damage/eye irritationCategory 2A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin. Causes serious

eye irritation. Toxic if inhaled.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly

closed. Ground/bond container and receiving equipment. Use explosion-proof

electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin (or hair): Take off

immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to

extinguish.

Storage Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place.

Keep cool. Store locked up.

Material name: Cythioate Solution

Disposal

Hazard(s) not otherwise classified (HNOC)

Supplemental information

Dispose of contents/container in accordance with local/regional/national/international regulations.

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetonitrile		75-05-8	99.99
Cythioate		115-93-5	0.01

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed Convulsions. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed

Pro ial imn

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Take off immediately all contaminated clothing. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

General fire hazards

Use standard firefighting procedures and consider the hazards of other involved materials.

Highly flammable liquid and vapor.

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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)					
Components	Туре	Value			
Acetonitrile (CAS 75-05-8)	PEL	70 mg/m3			
		40 ppm			

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US. ACGIH Threshold Limit Values

ComponentsTypeValueAcetonitrile (CAS 75-05-8)TWA20 ppmUS. NIOSH: Pocket Guide to Chemical Hazards
ComponentsValueAcetonitrile (CAS 75-05-8)TWA34 mg/m3
20 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Acetonitrile (CAS 75-05-8)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Acetonitrile (CAS 75-05-8) Skin designation applies.

US ACGIH Threshold Limit Values: Skin designation

Acetonitrile (CAS 75-05-8)

Danger of cutaneous absorption

Appropriate engineering

controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

limits (where applicable) or to an acceptable level (in countries where exposure limits have not

been established), an approved respirator must be worn. Dust & vapor respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid.
Color Not available.
Odor Not available.
Odor threshold Not available.
pH Not available.

Melting point/freezing point -49 °F (-45 °C) estimated Initial boiling point and boiling 178.88 °F (81.6 °C) estimated

range

Flash point

42.0 °F (5.6 °C) estimated

16 % estimated

Evaporation rate Not available.
Flammability (solid, gas) Not applicable.
Upper/lower flammability or explosive limits
Explosive limit - lower (%) 3 % estimated

Vapor pressure 118.39 hPa estimated

Vapor density Not available.

Explosive limit - upper (%)

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Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature 975.2 °F (524 °C) estimated

Decomposition temperature Not available. **Viscosity** Not available.

Other information

Density 0.7873 g/cm3 estimated

Explosive properties Not explosive.

Flammability class Flammable IB estimated

Oxidizing properties

Percent volatile

Specific gravity

VOC

Not oxidizing.

99.99 % estimated

0.79 estimated

99.99 % estimated

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous Hazardous polymerization does not occur.

reactions

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Toxic if inhaled.

Skin contactToxic in contact with skin.Eye contactCauses serious eye irritation.

Ingestion Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Convulsions. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing,

redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

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US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

This product is not expected to cause reproductive or developmental effects. Reproductive toxicity

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Prolonged inhalation may be harmful. **Chronic effects**

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Species Test Results

Acetonitrile (CAS 75-05-8)

Aquatic Acute

Components

Fish LC50 Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours

Persistence and degradability

No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acetonitrile -0.34

No data available. Mobility in soil

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation

potential.

13. Disposal considerations

Dispose of this material and its container to hazardous or special waste collection point. Incinerate **Disposal instructions**

> the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

DOT

UN1648 **UN number**

UN proper shipping name

Transport hazard class(es)

Acetonitrile, solution (Acetonitrile RQ = 5001 LBS)

Class 3 Subsidiary risk 3 Label(s) **Packing group** Ш

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB2, T7, TP2

Packaging exceptions 150 202 Packaging non bulk Packaging bulk 242

IATA

UN1648 **UN** number

Material name: Cythioate Solution S-11551A1 Version #: 02 Revision date: 10-17-2022 Issue date: 07-25-2014 **UN** proper shipping name Acetonitrile solution (Acetonitrile)

Transport hazard class(es)

3 Class Subsidiary risk Ш Packing group No. **Environmental hazards ERG Code** 3L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Allowed with restrictions. Passenger and cargo aircraft

Not established.

Cargo aircraft only Allowed with restrictions.

IMDG

UN1648 **UN** number

UN proper shipping name Transport hazard class(es)

ACETONITRILE SOLUTION (Acetonitrile)

Class 3 Subsidiary risk Ш Packing group

Environmental hazards

Marine pollutant No. **EmS** F-E, S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

or are designated "inactive".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Toxic Substances Control Act (TSCA)

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetonitrile (CAS 75-05-8) Listed.

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One or more components of the mixture are not on the TSCA 8(b) inventory

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Yes

chemical

Classified hazard Flammable (gases, aerosols, liquids, or solids)

categories Acute toxicity (any route of exposure)
Serious eye damage or eye irritation

Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical nameCAS number% by wt.Acetonitrile75-05-899.99

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Acetonitrile (CAS 75-05-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.

Acetonitrile (CAS 75-05-8)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Inventory name	On inventory (yes/no)*
Australian Inventory of Industrial Chemicals (AICIS)	No
Domestic Substances List (DSL)	No
Non-Domestic Substances List (NDSL)	Yes
Inventory of Existing Chemical Substances in China (IECSC)	No
European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
European List of Notified Chemical Substances (ELINCS)	No
Inventory of Existing and New Chemical Substances (ENCS)	No
Existing Chemicals List (ECL)	Yes
New Zealand Inventory	Yes
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan Chemical Substance Inventory (TCSI)	No
Toxic Substances Control Act (TSCA) Inventory	No
	Australian Inventory of Industrial Chemicals (AICIS) Domestic Substances List (DSL) Non-Domestic Substances List (NDSL) Inventory of Existing Chemical Substances in China (IECSC) European Inventory of Existing Commercial Chemical Substances (EINECS) European List of Notified Chemical Substances (ELINCS) Inventory of Existing and New Chemical Substances (ENCS) Existing Chemicals List (ECL) New Zealand Inventory Philippine Inventory of Chemicals and Chemical Substances (PICCS) Taiwan Chemical Substance Inventory (TCSI)

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

 Issue date
 07-25-2014

 Revision date
 10-17-2022

Version # 02

Material name: Cythioate Solution SDS US

NFPA ratings

Health: 3 Flammability: 3 Instability: 0

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.