SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2019
Date Updated: July 04, 2019

SECTION 1. - - - - - - - - - PRODUCT AND COMPANY IDENTIFICATION- - - - - - - - - -

Product Name	Acetonitrile
Product Code(s)	AC1400
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Inc.
Address	20 Konrad Crescent, Markham, Ontario, Canada, L3R 8T4
Telephone	(905) 474 4493
Fax	(905) 474 5794
For Chemical Emergency Phone#	(416) 995 9730

SECTION 2. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

Classification

Flammable liquid - Category 2; Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 4; Eye irritation - Category 2A

Label Elements

Danger

Hazard Statement(s):
Highly flammable liquid and vapour.
Harmful if swallowed, in contact with skin or if inhaled.
Causes serious eye irritation.
Precautionary Statement(s): Prevention:
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
In case of fire: Use appropriate foam, carbon dioxide, dry chemical powder to extinguish. Storage:
Store in a well-ventilated place. Keep cool. Disposal:
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

May be a health and fire hazard in a confined space.

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

Chemical Name	EC No.	CAS-No	Weight %
Acetonitrile	200-835-2	75-05-8	<100

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - - First-aid Measures

Inhalation

Take precautions to prevent a fire (e.g. remove sources of ignition). Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing. Get medical advice or attention if you feel unwell or are concerned. Immediately call a Poison Centre or doctor.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the Poison Centre or doctor. If breathing has stopped, trained personnel should immediately begin rescue breathing. If the heart has stopped, trained personnel should start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Avoid mouth-to-mouth contact by using a barrier device. Immediately call a Poison Centre or doctor.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled and/or on skin: can irritate the nose and throat. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Can harm the nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. A severe exposure can cause unconsciousness. In severe cases, symptoms may include fatigue, shortness of breath, bluish lips and skin, headache, nausea, vomiting, irregular heartbeat, dizziness and confusion. In severe cases, death can result.

Immediate Medical Attention and Special

Treatment Target Organs

Nervous system, respiratory system.

Special Instructions

Treat as cyanide poisoning.

Medical Conditions Aggravated by Exposure

Nervous system conditions, respiratory conditions, kidney conditions, liver conditions.

SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam. Special "alcohol resistant fire-fighting foams". Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

Water is not effective for extinguishing a fire. It may not cool product below its flash point.

Specific Hazards Arising from the Product

Flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in

a fire and/or health hazard. Closed containers may rupture violently when heated releasing contents. See Section 9 (Physical and Chemical Properties) for flash point and explosive limits.

Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases. Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. If the leak cannot be stopped, let the fire burn itself out. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.
A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Store recovered product in suitable containers that are: covered.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

Precautions for Safe Handling

Do not breathe in this product. Prevent all skin contact. Do not get in eyes, on skin or on clothing. Do not swallow. Only use where there is adequate ventilation. Electrically bond and ground equipment. Ground clips must contact bare metal. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources, secure and separate from work areas. Store in a closed container.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Acetonitrile	20 ppm	20 ppm	40 ppm			

Appropriate Engineering Controls

Exhaust directly to the outside, taking any necessary precautions for environmental protection. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this
product is used and stored.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

Basic Physical and Chemical Properties

Appearance	Clear colourless.
Odour	Pungent
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	-45.7 ºC (-50.3 ºF) (melting); Not available (freezing)
Initial Boiling Point/Range	81.60 ºC (178.88 ºF)
Flash Point	2 ºC (36 ºF)
Evaporation Rate	5.79 (n-butyl acetate = 1)
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	16% (upper); 3% (lower)
Vapour Pressure	9.87 kPa at 20 ºC
Vapour Density (air = 1)	1.43
Relative Density (water = 1)	0.786 at 20 ºC
Solubility	Soluble in all proportions in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	-0.34
Auto-ignition Temperature	523 ºC (973 ºF)
Decomposition Temperature	Not available
Viscosity	0.35 centipoises at 20 ºC (dynamic)

Other Information

Physical State	Liquid
Molecular Formula	CH3CN
Molecular Weight	41.05

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - - Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Incompatible with acids, bases, nitrating agents, nitrogen-fluorine compounds, oxidizers, perchlorates, sulfites.

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides; extremely hazardous hydrogen cyanide.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Acetonitrile	1347 ppm (mouse) (4-hour exposure)	617 mg/kg (mouse)	> 980 mg/kg (rabbit)

Skin Corrosion/Irritation

Not a skin irritant.

Serious Eye Damage/Irritation

Causes serious eye irritation based on skin irritation information. The vapour also irritates or burns the eyes. Permanent damage including blindness can result.

STOT (Specific Target Organ Toxicity) - Single

Exposure Inhalation

May cause depression of the central nervous system, decreased ability of the blood to carry oxygen. Symptoms may develop hours after exposure and are made worse by physical effort. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

Can cause effects as described for inhalation.

Ingestion

Symptoms may include headache, nausea, dizziness, drowsiness and confusion. A severe exposure can cause unconsciousness.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

In severe cases, symptoms may include paleness, abdominal pain, weakness, fever, shortness of breath, rapid heart rate, dark urine and yellowish eyes and skin. Permanent organ damage may occur. The brain and the heart are the most sensitive. In severe cases, symptoms may include fatigue, increased or decreased urination, nausea, and vomiting.

Respiratory and/or Skin Sensitization

Not known to be a skin sensitizer.

Carcinogenicity

Not a carcinogen.

Reproductive Toxicity

Development of

Offspring

May cause effects on the unborn child based on information for closely related chemicals. However, these effects are only seen with significant toxicity in the mothers.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not mutagenic.

Interactive Effects

No information was located.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Mobility in Soil

If released into the environment, this product can move rapidly through the soil. Contamination of groundwater could occur.

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

Disposal Methods

Recycle and reuse product, if possible. Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1648	Acetonitrile	3	II
US DOT	UN1648	Acetonitrile	3	II
IATA (Air)	UN1648	Acetonitrile	3	II
IMO (Marine)	Un1648	Acetonitrile	3	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

Safety, Health and Environmental

Regulations Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

CEPA - National Pollutant Release Inventory (NPRI)

Part 1A.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

Additional USA Regulatory Lists

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372. SARA Title III - Section 311/312 : Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

NFPA Rating **Health - 2** **Flammability - 3** **Instability - 0**

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS 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.

Issuing Date: 04-Jul-2019

End of SDS