

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : WAVE Optimized® Buffer B  
 Product code : 553402

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Buffer

#### 1.3. Details of the supplier of the safety data sheet

ADS Biotec, Inc.  
 7409 Irvington Road  
 Omaha, NE 68122 - USA  
[support@adstiotec.com](mailto:support@adstiotec.com)

#### 1.4. Emergency telephone number

Emergency Contact Number : USA: 1-800-255-3924 (CHEMTEL 24hr); International: +1-813-248-0585 (CHEMTEL 24hr)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Liq. 2 H225  
 Acute Tox. 4 (Oral) H302  
 Acute Tox. 4 (Dermal) H312  
 Acute Tox. 4 (Inhalation) H332  
 Eye Irrit. 2A H319

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

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

Precautionary statements (GHS-US) :

P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
 P233 - Keep container tightly closed  
 P240 - Ground/bond container and receiving equipment  
 P241 - Use explosion-proof electrical, ventilating, lighting equipment  
 P242 - Use only non-sparking tools  
 P243 - Take precautionary measures against static discharge  
 P261 - Avoid breathing vapours  
 P264 - Wash hands thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear protective gloves, protective clothing, eye protection, face protection  
 P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell  
 P330 - If swallowed, rinse mouth  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P362+P364 - Take off contaminated clothing and wash it before reuse

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P370+P378 - In case of fire: Use water for extinction  
P403+P235 - Store in a well-ventilated place. Keep cool  
P501 - Dispose of contents/container to licensed waste management site

### 2.3. Other hazards

Other hazards not contributing to the classification : Vapours may form explosive mixture with air.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Acetonitrile	(CAS No) 75-05-8	20 - 30	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
Triethylammonium acetate	(CAS No) 5204-74-0	1 - 5	Not classified

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air, keep the patient warm and at rest. If symptoms develop obtain medical attention.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. If symptoms develop obtain medical attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop obtain medical attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Give 100 - 200 ml of water to drink. If symptoms develop obtain medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Harmful if inhaled.

Symptoms/injuries after skin contact : Harmful in contact with skin.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : On exposure to high temperature, may decompose, releasing explosive vapours. May form flammable/explosive vapour-air mixture.

Reactivity : Stable under normal conditions.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.

Protection during firefighting : Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all contact with skin, eyes, or clothing.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and eye or face protection.

Emergency procedures : Remove ignition sources. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wash spill area with soapy water.

#### 6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Avoid contact with skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container tightly closed.

Incompatible products : Acids. Strong bases. Metals. Oxidizing agent. Reducing agents. Combustible materials.

#### 7.3. Specific end use(s)

A component of systems for genetic analysis of nucleic acid samples in a professional diagnostic or research laboratory.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Acetonitrile (75-05-8)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm

#### 8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Safety glasses with face shield.

Skin and body protection : Use chemically protective clothing.

Respiratory protection : Wear suitable respiratory protective equipment.

Thermal hazard protection : Not required for normal conditions of use.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Colourless.

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Odour	: Sweet.
Odour threshold	: No data available
pH	: 7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 6 °C ACETONITRILE
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 1.355
Relative density	: 0.97
Solubility	: Miscible with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 3 - 16 vol % ACETONITRILE

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Nitrogen oxides. Ammonia. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.
Skin corrosion/irritation	: Not classified pH: 7
Serious eye damage/irritation	: Causes serious eye irritation. pH: 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified

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Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful in contact with skin.
Symptoms/injuries after inhalation	: Harmful if inhaled.
Symptoms/injuries after skin contact	: Harmful in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified.

WAVE Optimized® Buffer B	
LC50 fish	1 g/l 96 h - (Mortality) Fathead minnow ( <i>Pimephales promelas</i> )
LC50 other aquatic organisms	0.024 - 0.199 µg/L 4-72 h Benthosed clam ( <i>Macoma nasuta</i> )

### 12.2. Persistence and degradability

WAVE Optimized® Buffer B	
Persistence and degradability	No information available.

### 12.3. Bioaccumulative potential

WAVE Optimized® Buffer B	
Bioaccumulative potential	No information available.

### 12.4. Mobility in soil

WAVE Optimized® Buffer B	
Ecology – soil	No information available.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT	
UN-No.(DOT)	: 1648
DOT Proper Shipping Name	: Acetonitrile
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid



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Packing group (DOT)	: II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

### Additional information

Other information : No supplementary information available.

### Transport by sea

Proper Shipping Name (IMDG)	: ACETONITRILE
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: II - substances presenting medium danger

### Air transport

Proper Shipping Name (IATA)	: ACETONITRILE
Class (IATA)	: 3 - Flammable Liquids
Packing group (IATA)	: II - Medium Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### WAVE Optimized® Buffer B

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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#### Triethylammonium acetate (5204-74-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Acetonitrile (75-05-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
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### 15.2. International regulations

#### CANADA

#### WAVE Optimized® Buffer B

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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#### 15.2.2. National regulations

No additional information available

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### 15.3. US State regulations

#### Acetonitrile (75-05-8)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Abbreviations and acronyms : ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route). CAS (Chemical Abstracts Service) number. IARC (International Agency for Research on Cancer). IATA (International Air Transport Association). IMDG (International Maritime Dangerous Goods Code). RID (Règlement concernant le transport international ferroviaire de marchandises).

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H319	Causes serious eye irritation
H332	Harmful if inhaled

NCEC SDS US GHS (Hazcom 2012)

*The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.*