Printing date 01/16/2020 Reviewed on 01/16/2020

1 Identification

· Product identifier

· Trade name: Chemical Blend #1

in Acetonitrile

· Article number: FIS064

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA 800-256-2586

· Information department:

Technical Coordinator

Sherman Nelson sherman@aquasolutions.org

· Emergency telephone number:

Chemtrec: 800-424-9300 Canutec: 613-996-6666



2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- · Label elements
- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

GHS08

· Signal word Danger

(Contd. on page 2)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1 in Acetonitrile

(Contd. of page 1)

· Hazard-determining components of labeling:

Acetonitrile, Reagent ACS Grade

diisobutyl phthalate

Phthalic Anhydride

· Hazard statements

Highly flammable liquid and vapor.

Harmful in contact with skin or if inhaled.

Causes serious eve irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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 dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

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

[In case of inadequate ventilation] wear respiratory protection.

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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 2Fire = 4

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *2

Fire = 4

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 2)

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable. · **vPvB**: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:				
CAS: 75-05-8	Acetonitrile, Reagent ACS Grade	84.0%		
CAS: 84-69-5	diisobutyl phthalate	8.0%		
CAS: 1640-89-	Ethylcyclopentane, 98%	7.0%		
CAS: 85-44-9	Phthalic Anhydride	0.4%		
· Table of Nonhazardous Ingredients				
CAS: 84-66-2	liethyl phthalate	0.6%		

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- $\cdot \textit{After skin contact:} \ \textit{Immediately wash with water and soap and rinse thoroughly}.$
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

HIS

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 3)

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:	
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	13 ppm
CAS: 84-66-2 diethyl phthalate	15 mg/m³
CAS: 85-44-9 Phthalic Anhydride	18 mg/m³
· PAC-2:	
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	50 ppm
CAS: 84-66-2 diethyl phthalate	300 mg/m^3
CAS: 85-44-9 Phthalic Anhydride	56 mg/m³
· PAC-3:	
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	150 ppm
CAS: 84-66-2 diethyl phthalate	$1,800 \text{ mg/m}^3$
CAS: 85-44-9 Phthalic Anhydride	$10,000 \text{ mg/m}^3$

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage.
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 4)

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

CAS: 75-05-8 Acetonitrile, Reagent ACS Grade PEL Long-term value: 70 mg/m³, 40 ppm REL Long-term value: 34 mg/m³, 20 ppm TLV Long-term value: 34 mg/m³, 20 ppm Skin

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1 in Acetonitrile

· Body protection: Protective work clothing

(Contd. of page 5)

· Information on basic physical and c	hemical properties
· General Information	
· Appearance:	7
Form: Color:	Liquid Clear-Pale Yellow
· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	36 °C (96.8 °F)
· Flash point:	5 °C (41 °F)
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vap-mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapor pressure at 20 °C (68 °F):	97 hPa (72.8 mm Hg)
· Density at 20 °C (68 °F):	$0.80631 \ g/cm^3 \ (6.72866 \ lbs/gal)$
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/wate	e r): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.4 %
· Other information	No further relevant information available.

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 6)

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50	values t	hat are	rolovant	for cl	lassificatio	n·
LULLUSU	vuiues i	nui ui c	<i>i</i> cicvaiii	<i>101</i> C	ussiiicaiio	ıı.

ATE (Acute Toxicity Estimate)

Oral	LD50	3,250 mg/kg (rat)
Dermal	LD50	1,488 mg/kg (rabbit)
Inhalative	LC50/4h	13.1 mg/l

CAS: 75-05-8 Acetonitrile, Reagent ACS Grade

Oral	LD50	500 mg/kg (ATE)
Dermal	LD50	1,100 mg/kg (ATE)
Inhalative	LC50/4h	11 mg/l (ATE)

- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: Irritating effect.
- · Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.

(Contd. on page 8)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 7)

- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

-	4 7					r	
	//	100	7710	$n \cap r$		OPINA	$TT \cap T$
-	_		11 NI			forma	uuuru
_			_		,		

· DOT, IMDG, IATA	UN1993
· UN-Number	

· UN proper shipping name
 · DOT
 · IMDG
 · IMDG
 · ILA MMABLE LIQUID, N.O.S. (ACETONITRILE, Ethylcyclopentane, 98%), MARINE POLLUTANT
 · IATA
 · ILA MMABLE LIQUID, N.O.S. (ACETONITRILE, Ethylcyclopentane, 98%)

· Transport hazard class(es)

 $\cdot DOT$



· Class· Label3 Flammable liquids3

 \cdot *IMDG*





· Class 3 Flammable liquids

(Contd. on page 9)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1 in Acetonitrile

	(Contd. of page
Label	3
· IATA	
3	
Class	3 Flammable liquids
Label	3
Packing group	
DOT, IMDG, IATA	II
Environmental hazards:	Product contains environmentally hazardous substances: diisobu
	phthalate
Marine pollutant:	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids
Danger code (Kemler):	33
EMS Number:	F- E , S - D
Stowage Category	В
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
~ .	On cargo aircraft only: 60 L
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (\widetilde{EQ})	Code: E2
· · · · · · · · · · · · · · · · ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRIL
-	ETHYLCYCLOPENTANE, 98%), 3, II

15 Regulatory information

 $\cdot \textit{Safety, health and environmental regulations/legislation specific for the substance or \textit{mixture}}$

· Sara			
· Section 355 (extremely hazardous substances):			
None of the ingredients is listed.			
· Section 313 (Specific toxic chemical listings):			
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade			
CAS: 85-44-9 Phthalic Anhydride			
· TSCA (Toxic Substances Control Act):			
Acetonitrile, Reagent ACS Grade	ACTIVE		
diisobutyl phthalate ACTIV			
diethyl phthalate ACTIV			

(Contd. on page 10)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

Dháh gli a Amhridaid a	(Contd. of page 9
Phthalic Anhydride	ACTIVE
Hazardous Air Pollutants	
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	
CAS: 85-44-9 Phthalic Anhydride	
Proposition 65	
Chemicals known to cause cancer:	
None of the ingredients is listed.	
Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
Carcinogenic categories	
EPA (Environmental Protection Agency)	
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	CBD, D
CAS: 84-66-2 diethyl phthalate	D
TLV (Threshold Limit Value established by ACGIH)	·
CAS: 75-05-8 Acetonitrile, Reagent ACS Grade	A4
CAS: 84-66-2 diethyl phthalate	A4
CAS: 85-44-9 Phthalic Anhydride	A4
NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

S02 GHS07

· Signal word Danger

· Hazard-determining components of labeling:

Acetonitrile, Reagent ACS Grade

diisobutyl phthalate

Phthalic Anhydride

· Hazard statements

Highly flammable liquid and vapor.

Harmful in contact with skin or if inhaled.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

(Contd. on page 11)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1
in Acetonitrile

(Contd. of page 10)

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 dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

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

[In case of inadequate ventilation] wear respiratory protection.

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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environment protection department.
- · Contact:
- · Date of preparation / last revision

Revision 0.1, 01-16-2020: Creation date for SDS. STN

01/16/2020 / -

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

(Contd. on page 12)

Printing date 01/16/2020 Reviewed on 01/16/2020

Trade name: Chemical Blend #1 in Acetonitrile

(Contd. of page 11)

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A Resp. Sens. 1: Respiratory sensitisation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Categor Skin Sens. 1: Skin sensitisation – Category 1 Repr. 1B: Reproductive toxicity – Category 1B

IIS