Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2024 *Reviewed on 06/13/2024*

1 Identification

· **Product identifier**

· **Trade name: Carboxylic Acid Mix**
1000 mg/L in 10% v/v IPA

· **Article number:** SPX832

· **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 shermann@aquasolutions.org
· **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flammable Liquids 2 H225 Highly flammable liquid and vapor.

GHS07

Sensitization - Skin 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

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Acetic Acid, Glacial
· **Hazard statements**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
· **Precautionary statements**
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.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2024 *Reviewed on 06/13/2024*

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 1)

Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Health = 0
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 3
Reactivity = 0

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

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3 Composition/information on ingredients

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

· **Dangerous components:**		
CAS: 67-63-0	Isopropanol	8.026%
CAS: 64-19-7	Acetic Acid, Glacial	0.102%
CAS: 79-31-2	Isobutyric Acid	0.102%
CAS: 107-92-6	butyric acid	0.102%
CAS: 646-07-1	4-Methylpentanoic acid	0.102%

· **Table of Nonhazardous Ingredients**		
CAS: 7732-18-5	Water	91.054%
CAS: 79-09-4	Propionic Acid, Reagent Grade	0.102%
CAS: 109-52-4	valeric acid	0.102%
CAS: 111-14-8	heptanoic acid	0.102%
CAS: 142-62-1	hexanoic acid	0.102%
CAS: 503-74-2	isovaleric acid	0.102%

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2024 Reviewed on 06/13/2024

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 2)

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4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **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.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **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.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Dilute with plenty of water.
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 section 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: 67-63-0	Isopropanol	400 ppm
CAS: 64-19-7	Acetic Acid, Glacial	5 ppm
CAS: 79-09-4	Propionic Acid, Reagent Grade	15 ppm
CAS: 79-31-2	Isobutyric Acid	0.23 ppm
CAS: 107-92-6	butyric acid	1.4 ppm
CAS: 109-52-4	valeric acid	2.2 mg/m³
CAS: 111-14-8	heptanoic acid	3.9 ppm

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 3)

CAS: 142-62-1	hexanoic acid	2.2 mg/m³

· **PAC-2:**

CAS: 67-63-0	Isopropanol	2000* ppm
CAS: 64-19-7	Acetic Acid, Glacial	35 ppm
CAS: 79-09-4	Propionic Acid, Reagent Grade	86 mg/m3
CAS: 79-31-2	Isobutyric Acid	2.6 ppm
CAS: 107-92-6	butyric acid	66 mg/m3
CAS: 109-52-4	valeric acid	24 mg/m³
CAS: 111-14-8	heptanoic acid	43 ppm
CAS: 142-62-1	hexanoic acid	24 mg/m³

· **PAC-3:**

CAS: 67-63-0	Isopropanol	12000** ppm
CAS: 64-19-7	Acetic Acid, Glacial	250 ppm
CAS: 79-09-4	Propionic Acid, Reagent Grade	510 mg/m3
CAS: 79-31-2	Isobutyric Acid	15 ppm
CAS: 107-92-6	butyric acid	400 mg/m3
CAS: 109-52-4	valeric acid	140 mg/m³
CAS: 111-14-8	heptanoic acid	260 ppm
CAS: 142-62-1	hexanoic acid	140 mg/m³

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **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.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 4)

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

CAS: 67-63-0 Isopropanol	
PEL	Long-term value: 980 mg/m³, 400 ppm
REL	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
TLV	Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4

CAS: 64-19-7 Acetic Acid, Glacial	
PEL	Long-term value: 25 mg/m³, 10 ppm
REL	Short-term value: 37 mg/m³, 15 ppm Long-term value: 25 mg/m³, 10 ppm
TLV	Short-term value: 15 ppm Long-term value: 10 ppm

· **Ingredients with biological limit values:**

CAS: 67-63-0 Isopropanol	
BEI	40 mg/L LD50 Intraperitoneal: urine Time: end of shift at end of workweek LD50: Acetone (background, nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
· **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.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 5)

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Clear
· **Odor:**	Alcohol
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82 °C (179.6 °F)
· **Flash point:**	13 °C (55.4 °F)
· **Flammability (solid, gaseous):**	Highly flammable.
· **Auto igniting:**	425 °C (797 °F)
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17.3 mm Hg)
· **Density at 20 °C (68 °F):**	0.97805 g/cm³ (8.16183 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	8.1 %

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 6)

Water:	91.1 %
VOC content:	8.13 % 79.5 g/l / 0.66 lb/gal
Solids content:	0.1 %
· **Other information**	No further relevant information available.

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.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Dermal	LD50	197,894 mg/kg
Inhalative	LC50/4h	>538 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
CAS: 67-63-0	Isopropanol	3

· **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)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(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 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **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.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	UN1993
· **UN proper shipping name**	
· **DOT**	Flammable liquids, n.o.s. (Isopropanol)
· **IMDG, IATA**	FLAMMABLE LIQUID, N.O.S. (Isopropanol)

· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 8)

· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Hazard identification number (Kemler code):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **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 (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. (ISOPROPANOL), 3, II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**	
CAS: 67-63-0	Isopropanol

· **TSCA (Toxic Substances Control Act):**	
Water	ACTIVE
Isopropanol	ACTIVE
Acetic Acid, Glacial	ACTIVE
Propionic Acid, Reagent Grade	ACTIVE
Isobutyric Acid	ACTIVE
butyric acid	ACTIVE
valeric acid	ACTIVE
heptanoic acid	ACTIVE
hexanoic acid	ACTIVE
isovaleric acid	ACTIVE
4-Methylpentanoic acid	ACTIVE

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 9)

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **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)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

CAS: 67-63-0	Isopropanol	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 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Acetic Acid, Glacial
· **Hazard statements**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
· **Precautionary statements**
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
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Carboxylic Acid Mix
1000 mg/L in 10% v/v IPA

(Contd. of page 10)

Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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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:
· **Date of preparation / last revision**
Revision 1.2, 06/13/2024: Reviewed SDS for accuracy. MH/STN
06/13/2024 / 1.0
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2
Sensitization - Skin 1: Skin sensitisation – Category 1
· *** Data compared to the previous version altered.**