

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/25/2021

Reviewed on 02/25/2021

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 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.

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



GHS02

- **Signal word** Danger
- **Hazard statements**
Highly flammable liquid and vapor.
- **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.
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.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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: 67-63-0 | Isopropanol | 8.026% |
| CAS: 79-31-2 | Isobutyric Acid | 0.102% |
| CAS: 107-92-6 | butyric acid | 0.102% |
| CAS: 503-74-2 | isovaleric acid | 0.102% |
| CAS: 646-07-1 | 4-Methylpentanoic acid | 0.102% |

· **Table of Nonhazardous Ingredients**

| | | |
|----------------|-------------------------------|---------|
| CAS: 7732-18-5 | Water | 91.054% |
| CAS: 64-19-7 | Acetic Acid | 0.102% |
| 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% |

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **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.

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- **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.

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 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: 67-63-0 | Isopropanol | 400 ppm |
| CAS: 64-19-7 | Acetic Acid | 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/m ³ |
| CAS: 111-14-8 | heptanoic acid | 3.9 ppm |
| CAS: 142-62-1 | hexanoic acid | 2.2 mg/m ³ |

· PAC-2:

| | | |
|---------------|-------------------------------|----------------------|
| CAS: 67-63-0 | Isopropanol | 2000* ppm |
| CAS: 64-19-7 | Acetic Acid | 35 ppm |
| CAS: 79-09-4 | Propionic Acid, Reagent Grade | 28 ppm |
| CAS: 79-31-2 | Isobutyric Acid | 2.6 ppm |
| CAS: 107-92-6 | butyric acid | 16 ppm |
| CAS: 109-52-4 | valeric acid | 24 mg/m ³ |
| CAS: 111-14-8 | heptanoic acid | 43 ppm |
| CAS: 142-62-1 | hexanoic acid | 24 mg/m ³ |

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| | | |
|-----------------|-------------------------------|-----------------------|
| · PAC-3: | | |
| CAS: 67-63-0 | Isopropanol | 12000** ppm |
| CAS: 64-19-7 | Acetic Acid | 250 ppm |
| CAS: 79-09-4 | Propionic Acid, Reagent Grade | 170 ppm |
| CAS: 79-31-2 | Isobutyric Acid | 15 ppm |
| CAS: 107-92-6 | butyric acid | 110 ppm |
| CAS: 109-52-4 | valeric acid | 140 mg/m ³ |
| CAS: 111-14-8 | heptanoic acid | 260 ppm |
| CAS: 142-62-1 | hexanoic acid | 140 mg/m ³ |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **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.

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: 67-63-0 Isopropanol | |
| PEL | Long-term value: 980 mg/m ³ , 400 ppm |
| REL | Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm |
| TLV | Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm |
| BEI | |
| · 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) |

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· **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:** Not required.

· **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

· **Body protection:** Protective work clothing

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):** Not applicable.

· **Ignition temperature:** 425 °C (797 °F)

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| | |
|---|--|
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | 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/cm ³ (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 % |
| 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.

11 Toxicological information

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

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

| | | |
|------|------|--------------|
| Oral | LD50 | 97,847 mg/kg |
|------|------|--------------|

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| | | |
|---|-------------|---------------|
| Dermal | LD50 | 118,205 mg/kg |
| Inhalative | LC50/4h | >192 mg/l |
| <ul style="list-style-type: none"> · Primary irritant effect: · on the skin: No irritant effect. · on the eye: No irritating effect. · Sensitization: No sensitizing effects known. · Additional toxicological information: · 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.
- **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.

14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN1993

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· **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

· **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

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

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US

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· **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

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

· **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 established by ACGIH)**

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

· **Signal word** Danger

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- **Hazard statements**

Highly flammable liquid and vapor.

- **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.

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.

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

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.

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** 02/25/2021 / -

- **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

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2