

SAFETY DATA SHEET

Acid Alcohol 1 percent

Section 1. Identification

1.1 Product identifier

Product name : Acid Alcohol 1 percent
Part no. : AR162, AR168, AR362
Validation date : 12/18/2024

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

Identified uses : Laboratory use
 Container type: Dispenser Pack
 AR162 // Acid Alcohol 1% // Artisan Acid-Fast Bacillus (AFB) Stain Kit // 65mL and 115 mL
 AR168 // Acid Alcohol 1% // Artisan Mucicarmine Stain Kit // 65mL and 115 mL
 AR362 // Acid Alcohol 1% // Artisan Acid-Fast Bacillus (AFB) Light Green Stain Kit // 65mL
 Reference number: SDS003

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 Tel: +1 800 227 9770

Agilent Technologies Singapore (International) Pte Ltd.
 No. 1 Yishun Avenue 7
 Singapore, 768923
 Tel. (65) 6276 2622

Agilent Technologies Denmark ApS
 Produktionsvej 42
 2600 Glostrup,
 Denmark
 Tel. +45 44 85 95 00

www.Agilent.com

e-mail address of person responsible for this SDS : SDS@Agilent.com

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H290 CORROSIVE TO METALS - Category 1
 H319 EYE IRRITATION - Category 2A
 H371 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

Section 2. Hazards identification

2.2 GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H225 - Highly flammable liquid and vapor.
 H290 - May be corrosive to metals.
 H319 - Causes serious eye irritation.
 H371 - May cause damage to organs. (central nervous system (CNS), optic nerve)

Precautionary statements

Prevention

: P280 - Wear eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.
 P242 - Use non-sparking tools.
 P243 - Take action to prevent static discharges.
 P234 - Keep only in original packaging.
 P233 - Keep container tightly closed.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.

Response

: P390 - Absorb spillage to prevent material damage.
 P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 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 or attention.

Storage

: P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 Other hazards

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	Identifiers
Ethanol	≥50 - ≤75	CAS: 64-17-5
Propan-2-ol	≤4.9	CAS: 67-63-0
Methanol	≤4.9	CAS: 67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause damage to organs following a single exposure if inhaled.
- Skin contact** : May cause damage to organs following a single exposure in contact with skin.
- Ingestion** : May cause damage to organs following a single exposure if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Formaldehyde.

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Section 7. Handling and storage

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- 7.2 Conditions for safe storage, including any incompatibilities** : Specific storage conditions: Please consult the label.
Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Eliminate all ignition sources. Separate from alkalis. Separate from oxidizing materials. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
- 7.3 Specific end use(s)**
- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p> Ethanol</p>	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 1000 ppm. TWA 10 hours: 1900 mg/m³.</p> <p>CAL OSHA PEL (United States, 5/2018) TWA 8 hours: 1900 mg/m³. TWA 8 hours: 1000 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 1000 ppm. TWA 8 hours: 1900 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 1000 ppm. TWA 8 hours: 1900 mg/m³.</p> <p>ACGIH TLV (United States, 1/2024) A3. STEL 15 minutes: 1000 ppm.</p>
Propan-2-ol	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 400 ppm. TWA 10 hours: 980 mg/m³.</p>

Section 8. Exposure controls/personal protection

<p>Methanol</p>	<p>STEL 15 minutes: 500 ppm. STEL 15 minutes: 1225 mg/m³. CAL OSHA PEL (United States, 5/2018) STEL 15 minutes: 1225 mg/m³. STEL 15 minutes: 500 ppm. TWA 8 hours: 980 mg/m³. TWA 8 hours: 400 ppm. OSHA PEL (United States, 5/2018) TWA 8 hours: 400 ppm. TWA 8 hours: 980 mg/m³. OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 400 ppm. TWA 8 hours: 980 mg/m³. STEL 15 minutes: 500 ppm. STEL 15 minutes: 1225 mg/m³. ACGIH TLV (United States, 1/2024) A4. TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm.</p> <p>NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>CAL OSHA PEL (United States, 5/2018) Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 200 ppm. TWA 8 hours: 260 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) Absorbed through skin. TWA 8 hours: 200 ppm. TWA 8 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³.</p> <p>ACGIH TLV (United States, 1/2024) Absorbed through skin. TWA 8 hours: 200 ppm. TWA 8 hours: 262 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 328 mg/m³.</p>
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[Biological exposure indices](#)

Ingredient name	Exposure indices
<p>Propan-2-ol</p> <p>Methanol</p>	<p>ACGIH BEI (United States, 1/2024) BEI: 40 mg/l, acetone [in urine]. Sampling time: end of shift at end of workweek.</p> <p>ACGIH BEI (United States, 1/2024) BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.</p>

Section 8. Exposure controls/personal protection

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid. [Clear.]
Color : Colorless.
Odor : Alcohol-like. [Slight]
Odor threshold : Not available.
pH : 1.19 to 1.39
Melting point/freezing point : Not available.

Section 9. Physical and chemical properties and safety characteristics

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Closed cup: 16.6°C (61.9°F)

Evaporation rate : Not available.

Flammability : Not applicable.

Lower and upper explosion limit/flammability limit : Lower: 3.3%
Upper: 19%

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Methanol	126.96329	16.9	-	-	-	-
Ethanol	42.94865	5.7	-	-	-	-

Relative vapor density : Not available.

Relative density : Not available.

Media	Result
Water	Soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not applicable.

Ingredient name	°C	°F	Method
Ethanol	455	851	DIN 51794
Methanol	455	851	DIN 51794

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis
oxidizing materials
metals

Section 10. Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Ethanol	Rat - Oral - LD50	7 g/kg
	Rat - Inhalation - LC50 Vapor	124700 mg/m ³ [4 hours]
Propan-2-ol	Rabbit - Dermal - LD50	12800 mg/kg
	Rat - Oral - LD50	5000 mg/kg
Methanol	Rabbit - Dermal - LD50	15800 mg/kg
	Rat - Oral - LD50	5600 mg/kg
	Rat - Inhalation - LC50 Vapor	145000 ppm [1 hours]
	Rat - Inhalation - LC50 Vapor	64000 ppm [4 hours]
	Rat - Inhalation - LC50 Vapor	83.84 mg/l [4 hours]
	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result	
Propan-2-ol	Rabbit - Skin - Mild irritant	-
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours

Conclusion/Summary [Product] : Repeated exposure may cause skin dryness or cracking.

Ingredient name

Propan-2-ol
Methanol

Conclusion/Summary

Repeated exposure may cause skin dryness or cracking.
Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Product/ingredient name	Result	
Ethanol	Rabbit - Eyes - Mild irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 0.066666667 minutes
Propan-2-ol	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
Methanol	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Severe irritant	-

Conclusion/Summary [Product] : May cause eye irritation.

Ingredient name

Methanol

Conclusion/Summary

May cause eye irritation.

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
Propan-2-ol	-	3	-

Reproductive toxicity

Conclusion/Summary [Product] : Repeated or prolonged exposure to the substance can produce reproductive system damage.

Ingredient name

Methanol

Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

Specific target organ toxicity (single exposure)

Product/ingredient name

Propan-2-ol

Methanol

Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS), optic nerve) - Category 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause damage to organs following a single exposure if inhaled.
- Skin contact** : May cause damage to organs following a single exposure in contact with skin.
- Ingestion** : May cause damage to organs following a single exposure if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Acid Alcohol 1 percent	2994.2	9162.3	N/A	91.6	N/A
Ethanol	7000	N/A	N/A	124.7	N/A
Propan-2-ol	5000	12800	N/A	72.2	N/A
Methanol	100	300	N/A	3	N/A

- Other information** : Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result
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Section 12. Ecological information

Ethanol	Acute - LC50 - Marine water	11 g/l [96 hours]
	Chronic - NOEC - Marine water	4.995 mg/l [96 hours]
	Chronic - NOEC - Fresh water	100 µl/l [21 days]
Propan-2-ol	Acute - EC50 - Marine water	3306 mg/l [96 hours]
	Acute - EC50 - Fresh water	2 mg/l [48 hours]
Methanol	Acute - LC50 - Marine water	1400 mg/l [48 hours]
	Acute - LC50 - Fresh water	4200 mg/l [96 hours]
	Acute - LC50 - Marine water	2500 mg/l [48 hours]
	Acute - LC50 - Fresh water	290 mg/l [96 hours]
	Chronic - NOEC - Marine water	9.96 mg/l [96 hours]
	Acute - EC50 - Marine water	2736 mg/l [96 hours]

Conclusion/Summary : Not available.
[Product]

12.2 Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethanol	-	-	Readily
Propan-2-ol	-	-	Readily
Methanol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Ethanol	-0.35	0.5	Low
Propan-2-ol	0.05	-	Low
Methanol	-0.77	<10	Low

12.4 Mobility in soil

Soil/Water partition coefficient : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Toxic hazardous waste "U" List

Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
Methanol (l)	67-56-1	Listed	U154

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN2924	UN2924	UN2924	UN2924	UN2924
UN proper shipping name	Flammable liquids, corrosive, n.o.s. (Ethanol, Propan-2-ol, Methanol, Hydrochloric acid)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Ethanol, Propan-2-ol, Methanol, Hydrochloric acid)	☑QUIDO INFLAMABLE, CORROSIVO, N. E.P. (Ethanol, Propan-2-ol, Methanol, Hydrochloric acid)	FLAMMABLE LIQUID, CORROSIVE, N.O. S. (Ethanol, Propan-2-ol, Methanol, Hydrochloric acid)	Flammable liquid, corrosive, n.o.s. (Ethanol, Propan-2-ol, Methanol, Hydrochloric acid)
Transport hazard class(es)	3 (8) 	3 (8) 	3 (8) 	3 (8) 	3 (8) 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

If shipped as part of a kit "UN3316 (Chemical kit), Class 9, PG II" can be used. Precondition: UN3316 must be allowed for the remaining vials in same kit too.

DOT Classification

- : **Limited quantity** Yes.
- : **Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 243.
- : **Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 5 L.
- : **Special provisions** IB2, T11, TP2, TP27

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8).
- : **Explosive Limit and Limited Quantity Index** 1
- : **Passenger Carrying Road or Rail Index** 1
- : **Special provisions** 16

Mexico Classification

- : **Special provisions** 274

IMDG

- : **Emergency schedules** F-E, S-C
- : **Special provisions** 274

Section 14. Transport information

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352. Cargo Aircraft Only: 5 L. Packaging instructions: 363. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y340.
Special provisions A3, A803

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **Clean Water Act (CWA) 311:** Hydrochloric acid

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrochloric acid	<1	Yes.	500	-	5000	-

SARA 304 RQ : 58208.7 lbs / 435026.8 kg

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
CORROSIVE TO METALS - Category 1
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
Ethanol	≥50 - ≤75	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A HNOC - Defatting irritant
Propan-2-ol	≤4.9	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Methanol	≤4.9	HNOC - Defatting irritant FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	≤4.9
Supplier notification	Methanol	67-56-1	≤4.9

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts

: The following components are listed: ETHYL ALCOHOL; ISOPROPYL ALCOHOL; METHANOL

New York

: The following components are listed: Methanol

New Jersey

: The following components are listed: ETHYL ALCOHOL; ISOPROPYL ALCOHOL; METHYL ALCOHOL

Pennsylvania

: The following components are listed: ETHANOL; 2-PROPANOL; METHANOL

California Prop. 65

⚠ WARNING: This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia

: All components are listed or exempted.

Section 15. Regulatory information

Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: All components are listed or exempted.
Turkey	: All components are listed or exempted.
United States	: All components are active or exempted.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	Expert judgment
CORROSIVE TO METALS - Category 1	Expert judgment
EYE IRRITATION - Category 2A	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2	Calculation method

History

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Date of previous issue : 11/19/2021

Version : 6

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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