

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Acid Alcohol, 0.5%
Product code : 7560

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier

Astral Diagnostics Inc.
Logan Township NJ 08085 - United States
T +1 856 224 0900
800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time
www.ethosbiosciences.com

1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225 Highly flammable liquid and vapor
Acute toxicity (oral) Category 4	H302 Harmful if swallowed
Skin corrosion/irritation Category 1B	H314 Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318 Causes serious eye damage
Reproductive toxicity Category 2	H361 Suspected of damaging fertility or the unborn child
Specific target organ toxicity (single exposure) Category 1	H370 Causes damage to organs (central nervous system, optic nerve)

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child
H370 - Causes damage to organs (central nervous system, optic nerve)

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe mist, vapors, spray.
P264 - Wash exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.

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P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a poison center or doctor/physician.
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Ethanol	(CAS-No.) 64-17-5	63	Flam. Liq. 2, H225
Hydrochloric Acid, 37% w/w	(CAS-No.) 7647-01-0	0.5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
Methanol	(CAS-No.) 67-56-1	< 3	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
Isopropyl Alcohol (2-Propanol)	(CAS-No.) 67-63-0	4	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H335
Water	(CAS-No.) 7732-18-5	30	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child. Causes damage to organs.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Nausea. Vomiting. Dizziness. Diarrhoea. Central nervous system depression.

Chronic symptoms : Enlargement/affection of the liver. Kidney disorders.

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves. Face-shield.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing mist, Vapors, spray.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

- See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Do not breathe mist, vapors, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, incompatible materials. Keep in fireproof place. Keep container tightly closed.
- Incompatible products : Strong bases. Strong oxidizers.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

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Hydrochloric Acid, 37% w/w (7647-01-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (mg/m³)	2.98 mg/m³
ACGIH Ceiling (ppm)	2 ppm
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (Ceiling) (mg/m³)	7 mg/m³
OSHA PEL (Ceiling) [ppm]	5 ppm
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	50 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (ceiling) (mg/m³)	7 mg/m³
NIOSH REL (Ceiling) [ppm]	5 ppm
Ethanol (64-17-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethanol
ACGIH STEL (ppm)	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL (TWA) (mg/m³)	1900 mg/m³
OSHA PEL (TWA) (ppm)	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	3300 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m³)	1900 mg/m³
NIOSH REL (TWA) [ppm]	1000 ppm
Methanol (67-56-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH TWA (ppm)	200 ppm
ACGIH STEL (ppm)	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
Local name	METHANOL
Biological Exposure Indices (BEI)	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: End of shift - Notations: B, Ns
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA PEL (TWA) (ppm)	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	6000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m³)	250 mg/m³
NIOSH REL (TWA) [ppm]	200 ppm
NIOSH REL (STEL) (mg/m³)	325 mg/m³
NIOSH REL (STEL) [ppm]	250 ppm
Remark (NIOSH)	Skin

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Isopropyl Alcohol (2-Propanol) (67-63-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Propanol
ACGIH TWA (ppm)	200 ppm
ACGIH STEL (ppm)	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
Local name	2-PROPANOL
Biological Exposure Indices (BEI)	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OSHA PEL (TWA) (mg/m³)	980 mg/m³
OSHA PEL (TWA) (ppm)	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	2000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m³)	980 mg/m³
NIOSH REL (TWA) [ppm]	400 ppm
NIOSH REL (STEL) (mg/m³)	1225 mg/m³
NIOSH REL (STEL) [ppm]	500 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. High gas/vapor concentration: gas mask with filter type A. Chemical resistant apron.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or face shield

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: characteristic mild
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Reacts violently with (some) bases: release of heat.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong oxidizers. Strong bases. Ammonia.

10.6. Hazardous decomposition products

Hydrogen chloride. Carbon monoxide. Carbon dioxide. May release flammable gases. Thermal decomposition generates : Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE US (oral)	1830.065 mg/kg body weight
Hydrochloric Acid, 37% w/w (7647-01-0)	
LD50 oral rat	700 mg/kg

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Hydrochloric Acid, 37% w/w (7647-01-0)	
LD50 dermal rabbit	5010 mg/kg
ATE US (oral)	700 mg/kg body weight
ATE US (dermal)	5010 mg/kg body weight

Ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg (Rat; Experimental value,Rat; Experimental value)
LD50 dermal rabbit	> 15800 mg/kg body weight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	125 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	10740 mg/kg body weight

Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg body weight (BASF test, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LC50 Inhalation - Rat	128 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapors))
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

Isopropyl Alcohol (2-Propanol) (67-63-0)	
LD50 oral rat	5840 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	12882 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Converted value, Dermal, 14 day(s))
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapors), 14 day(s))
ATE US (oral)	5840 mg/kg body weight
ATE US (dermal)	16400 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

STOT-single exposure	: Causes damage to organs (central nervous system, optic nerve).
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Hydrochloric Acid, 37% w/w (7647-01-0)	
STOT-single exposure	May cause respiratory irritation.

Methanol (67-56-1)	
STOT-single exposure	Causes damage to organs (liver, kidneys, central nervous system, optic nerve) (Dermal, oral).

Isopropyl Alcohol (2-Propanol) (67-63-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure	: Not classified
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Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Likely routes of exposure	: Inhalation. Skin and eye contact.
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child. Causes damage to organs.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.

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Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Nausea. Vomiting. Dizziness. Diarrhoea. Central nervous system depression.
Chronic symptoms	: Enlargement/affection of the liver. Kidney disorders.

SECTION 12: Ecological information

12.1. Toxicity

Hydrochloric Acid, 37% w/w (7647-01-0)	
LC50 fish 1	282 mg/l (96 h, <i>Gambusia affinis</i> , Pure substance)
EC50 Daphnia 1	< 56 mg/l (72 h, <i>Daphnia magna</i> , Pure substance)
Ethanol (64-17-5)	
LC50 fish 1	15300 mg/l (US EPA, 96 h, <i>Pimephales promelas</i> , Flow-through system, Fresh water, Experimental value, Lethal)
Methanol (67-56-1)	
LC50 fish 1	15400 mg/l (EPA 660/3 - 75/009, 96 h, <i>Lepomis macrochirus</i> , Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	18260 mg/l (OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test, 96 h, <i>Daphnia magna</i> , Semi-static system, Fresh water, Experimental value, Locomotor effect)
Isopropyl Alcohol (2-Propanol) (67-63-0)	
LC50 fish 1	9640 – 10000 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Pimephales promelas</i> , Flow-through system, Fresh water, Experimental value, Lethal)

12.2. Persistence and degradability

Acid Alcohol, 0.5%	
Persistence and degradability	Not established.
Hydrochloric Acid, 37% w/w (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Ethanol (64-17-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 – 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43
Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 1.12 g O ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
Isopropyl Alcohol (2-Propanol) (67-63-0)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.19 g O ₂ /g substance
Chemical oxygen demand (COD)	2.23 g O ₂ /g substance
ThOD	2.4 g O ₂ /g substance

12.3. Bioaccumulative potential

Acid Alcohol, 0.5%	
Bioaccumulative potential	Not established.

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Hydrochloric Acid, 37% w/w (7647-01-0)	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Ethanol (64-17-5)	
BCF fish 1	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.
Methanol (67-56-1)	
BCF fish 1	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Log Pow	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Isopropyl Alcohol (2-Propanol) (67-63-0)	
Log Pow	0.05 (Weight of evidence approach, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Hydrochloric Acid, 37% w/w (7647-01-0)	
Ecology - soil	No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.
Ethanol (64-17-5)	
Surface tension	22.31 mN/m (20 °C, 100 %)
Log Koc	0.2 (log Koc, Experimental value)
Ecology - soil	Highly mobile in soil.
Methanol (67-56-1)	
Surface tension	No data available in the literature
Log Koc	-0.89 – -0.21 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
Isopropyl Alcohol (2-Propanol) (67-63-0)	
Surface tension	No data available (test not performed)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2924 Flammable liquids, corrosive, n.o.s., 3, II

UN-No.(DOT) : UN2924

Proper Shipping Name (DOT) : Flammable liquids, corrosive, n.o.s.

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : II - Medium Danger

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Hazard labels (DOT) : 3 - Flammable liquid
8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 243
DOT Symbols : G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 5 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"
Other information : No supplementary information available.

Transport by sea

Transport document description (IMDG) : UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Ethanol, hydrochloric acid), 3 (8), II
UN-No. (IMDG) : 2924
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger
Subsidiary risks (IMDG) : 8 - Corrosive substances
Limited quantities (IMDG) : 1 L

Air transport

Transport document description (IATA) : UN 2924 Flammable liquid, corrosive, n.o.s. (Ethanol, hydrochloric acid), 3 (8), II
UN-No. (IATA) : 2924
Proper Shipping Name (IATA) : Flammable liquid, corrosive, n.o.s.
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger
Subsidiary hazards (IATA) : 8 - Corrosive substances

Acid Alcohol, 0.5%

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SECTION 15: Regulatory information

15.1. US Federal regulations

Acid Alcohol, 0.5%

SARA Section 311/312 Hazard Classes

Physical hazard - Flammable (gases, aerosols, liquids, or solids)
Health hazard - Acute toxicity (any route of exposure)
Health hazard - Skin corrosion or Irritation
Health hazard - Serious eye damage or eye irritation
Health hazard - Reproductive toxicity
Health hazard - Specific target organ toxicity (single or repeated exposure)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hydrochloric Acid, 37% w/w	CAS-No. 7647-01-0	5%
Methanol	CAS-No. 67-56-1	4.75%
Isopropyl Alcohol (2-Propanol)	CAS-No. 67-63-0	4.75%

Hydrochloric Acid, 37% w/w (7647-01-0)

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

Methanol (67-56-1)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Acute toxicity (any route of exposure) Health hazard - Specific target organ toxicity (single or repeated exposure)

Isopropyl Alcohol (2-Propanol) (67-63-0)

SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)
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15.2. International regulations

CANADA

Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

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.

Acid Alcohol, 0.5%

Safety Data Sheet

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SECTION 16: Other information

Revision date : 08 DEC 2022

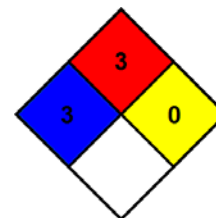
Full text of H-phrases: see section 16:

H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : H

Personal protection H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

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SDS US (GHS HazCom 2012)

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