

Safety Data Sheet

Acid Alcohol, 0.5% Hydrochloric Acid, 90% Alcohol

Section 1 - Chemical Product and Company Identification

SDS Name: Acid Alcohol, 0.5% Hydrochloric Acid, 90% Alcohol

Catalog Numbers: SO-581

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H225-Flammable liquids: 2

H290-Corrosive to metals: 1

H302-Acute toxicity, oral: 4

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H371-Specific target organ toxicity, single exposure: 2

H373-Specific target organ toxicity, repeated exposure: 2

Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

Hazard Statements:

H225-Highly flammable liquid and vapour

H290-May be corrosive to metals

H302-Harmful if swallowed
H314-Causes severe skin burns and eye damage
H318-Causes serious eye damage
H335-May cause respiratory irritation
H371-May cause damage to organs (target organs: respiratory system, central nervous system, and optic nerve)
H373-May cause damage to organs through prolonged or repeated exposure (target organs: kidney, liver, spleen, and blood)

Precautionary Statements:

P210-Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233-Keep container tightly closed.
P234-Keep only in original packaging.
P240-Ground and bond container and receiving equipment.
P241-Use explosion-proof electrical/ventilating/lighting equipment.
P242-Use non-sparking tools.
P243-Take action to prevent static discharges.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P271-Use only outdoors or in a well-ventilated area.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312-If swallowed: Call a Poison Center/doctor if you feel unwell.
P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353-If on skin (or hair): 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+P311-If exposed or concerned: Call a Poison Center/doctor.
P310-Immediately call a Poison Center/doctor.
P312-Call a Poison Center/doctor if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P330-Rinse mouth.
P363-Wash contaminated clothing before reuse.
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray or alcohol-resistant foam to extinguish.
P390-Absorb spillage to prevent material damage.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
P403+P235-Store in a well-ventilated place. Keep cool.
P405-Store locked up.
P406-Store in a corrosion resistant container with a resistant inner liner.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
64-17-5	Ethyl Alcohol	77 v/v
67-63-0	Isopropyl Alcohol	9 v/v
67-56-1	Methyl Alcohol	4 v/v
7647-01-1	Hydrochloric Acid (36-38%)	0.5 v/v
7732-18-5	Water	Balance

Section 4 - First Aid Measures

Eye Exposure: Corrosive to naked eye. In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Remove contact lenses, if present and easy to do. Continue rinsing. May cause permanent eye damage or blindness. Get immediate medical attention.

Dermal Exposure: Obtain immediate medical attention; corrosive to exposed skin. Causes severe skin burns. In case of skin contact, flush with copious amounts of water for at least 15 minutes. Take off immediately all contaminated clothing and shoes. Wash clothing and shoes before reuse.

Oral Exposure: If swallowed, get immediate medical advice. Will cause severe burns to the mouth and severe and permanent damage to the digestive tract. Do not induce vomiting. Rinse mouth with water and, after rinsing, drink water.

Inhalation Exposure: If inhaled, remove to fresh air. Get immediate medical attention. If not breathing, give artificial respiration. Inhalation of vapors may cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract.

Section 5 - Fire Fighting Measures

General Information: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Highly flammable liquid and vapor. Corrosive liquid. Keep away from metals and other incompatible materials. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, dry sand, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Hazardous Combustion Products: Carbon oxides, formaldehyde, hydrogen chloride gas,

hydrogen gas, chlorine fumes, peroxides, irritating and toxic fumes and gases.

Flash Point: Not available

Autoignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 2; Flammability: 4; Instability: 0

Note: Static discharge could act as an ignition source.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep away from heat. Eliminate all sources of ignition. Take precautionary measures against static discharge.

Methods for Cleaning up: Spilled material may be neutralized with alkaline material (soda ash, lime). Absorb with inert material such as sand, earth, or vermiculite. Do NOT absorb with combustible material such as saw dust or cellulosic material. Carefully sweep up and containerize for proper disposal. Use only non-sparking tools. Use explosion-proof equipment and take precautionary measures against static discharge. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep in a tightly closed and non-metal container. Store in a cool, dry, and well-ventilated area. Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Use proper grounding procedures to avoid static electricity. Keep away from incompatible materials, including metals. Protect from heat. Vapors heavier than air may travel considerable distance and ignite or explode.

Note: Static discharge could act as an ignition source. This is a corrosive and flammable material.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Ethyl Alcohol CAS#64-17-5	1000 ppm STEL	1000 ppm TWA 1900 mg/m ³ TWA 3300 ppm IDLH	1000 ppm TWA 1900 mg/m ³ TWA
Isopropyl Alcohol CAS#67-63-0	200 ppm TWA 400 ppm STEL	400 ppm TWA 980 mg/m ³ TWA 500 ppm STEL 1225 mg/m ³ STEL 2000 ppm IDLH	400 ppm TWA 980 mg/m ³ TWA
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm Skin STEL	200 ppm TWA 260 mg/m ³ TWA 250 ppm STEL 325 mg/m ³ STEL 6000 ppm IDLH	200 ppm TWA 260 mg/m ³ TWA
Hydrochloric Acid CAS#7647-01-0	2 ppm Ceiling	5 ppm Ceiling 7 mg/m ³ Ceiling 50 ppm IDLH	5 ppm Ceiling 7 mg/m ³ Ceiling

OSHA Vacated PELs: Ethyl Alcohol: 1000 ppm TWA; 1900 mg/m³ TWA
Isopropyl Alcohol: 400 ppm TWA; 980 mg/m³ TWA; 500 ppm STEL; 1225 mg/m³ STEL
Methyl Alcohol: 200 ppm TWA; 260 mg/m³ TWA; 250 ppm STEL; 325 mg/m³ Skin STEL
Hydrochloric Acid: 5 ppm Ceiling; 7 mg/m³ Ceiling

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear, colorless

Odor: Alcohol-like

Vapor Pressure: Not available

Odor Threshold: Not available

Vapor Density: Not available

pH: Approx. 1.4

Relative Density: Not available

Melting point/freezing point: Not available

Solubility: Soluble in water

Boiling Point: Not available

Flash Point: Not available

Evaporation Rate: Not available

Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Reacts violently with oxidizers: Risk of fire/explosion.

Conditions to Avoid: Avoid direct sunlight and extremely high or low temperatures. Avoid all possible sources of ignition (spark or flame). Keep away from hot surfaces and avoid incompatible materials.

Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, acids, bases, alkali metals, metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, various plastics, magnesium, rubber, zinc alloys, metal alloys, halogens, halogenated compounds, aluminum, sodium hypochlorite, amines, fluorine, cyanides, alkaline, hydroxides, carbonates, sulfides, sulfites, formaldehyde, potassium dioxide, permanganates, metal oxides, metal acetylides, and aluminum.

Hazardous Decomposition Products: Carbon oxides, formaldehyde, hydrogen chloride gas, hydrogen gas, chlorine fumes, peroxides, irritating and toxic fumes and gases.

Section 11 - Toxicological Information

CAS#64-17-5 Ethyl Alcohol: RTECS#: KQ6300000

LD50 Oral: 10470 mg/kg (rat)

LD50 Dermal: Not available

LC50 Inhalation: 124.7 mg/L 4h (rat)

Tumorigen, mutagen, reproductive effector per RTECS.

Draize test, rabbit, eye: 500 mg/24h Mild Irritant.

Skin: Repeated exposure may cause skin dryness or cracking.

Ethyl Alcohol overexposure may lead to headache, dizziness, tiredness, nausea, and vomiting.

Carcinogenicity: Ethyl Alcohol CAS#64-17-5 is not listed by OSHA. Ethyl Alcohol is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), and ACGIH (A3, Animal Carcinogen). Ethyl Alcohol is listed by California Prop. 65 as a developmental carcinogen (alcoholic beverages only).

CAS#67-63-0 Isopropyl Alcohol: RTECS#: NT8050000

LD50 Oral: 5045 mg/kg (rat)
LD50 Dermal: 12800 mg/kg (rat)
LD50 Inhalation: 72.6 mg/L 4h (rat)

Tumorigen, mutagen, reproductive effector per RTECS.

Carcinogenicity: Isopropyl Alcohol CAS#67-63-0 is not listed by NTP, ACGIH, OSHA, or California Prop. 65. Isopropyl Alcohol is listed by IARC (Group 3, Not classifiable as to its Carcinogenicity to Humans).

CAS#67-56-1 Methyl Alcohol: RTECS#: PC1400000

LD50 Oral: 100.1 mg/kg (expert judgement)
LD50 Dermal: 300.1 mg/kg (expert judgement)
LC50 Inhalation: 3.1 mg/L 4h vapor (expert judgement)

Mutagen, reproductive effector per RTECS.

Draize test, rabbit, eye: 100 mg/24h Moderate Irritant.

Draize test, rabbit, skin: 20 mg/24h Moderate Irritant.

Carcinogenicity: Methyl Alcohol CAS#67-56-1 is not listed by IARC, NTP, ACGIH, or OSHA. Methyl Alcohol is listed by California Prop. 65 as a developmental carcinogen.

CAS#7647-01-0 Hydrochloric Acid: RTECS#: MW4025000

LD50 Oral: 238-277 mg/kg (rat)
LD50 Dermal: >5010 mg/kg (rabbit)
LC50 Inhalation: 1.68 mg/L 1h (rat)

Carcinogenicity: Hydrochloric Acid CAS#7647-01-0 is not listed by NTP, ACGIH, OSHA, or California Prop. 65. Hydrochloric Acid is listed by IARC (Group 3, Not Classifiable as to its Carcinogenicity to Humans).

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Not available.

Specific Organ Toxicity, Single Exposure: Respiratory system, central nervous system, and optic nerve.

Specific Organ Toxicity, Repeated Exposure: Kidney, liver, spleen, and blood.

Symptoms associated with exposure: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting. Inhalation may cause mucosal irritations, cough, shortness of breath, and damage to the respiratory tract. Eye contact may result in corneal damage, blindness, pain, irritation, watering, redness, blurred or double vision. Corrosive material. Causes damage to organs if in contact with skin, if inhaled or if swallowed. Skin contact may cause severe burns, redness, pain, deep ulcers, and skin discoloration. Prolonged or repeated exposure can defat the skin and lead

to dryness, cracking, and dermatitis. Repeated or prolonged exposure may result in liver damage. Narcotic effect. May cause nervous system disturbances.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Toxic to aquatic life. May cause long-term adverse effects to the environment.

CAS#64-17-5 Ethyl Alcohol:

LC50, freshwater fish: 14200 mg/L 96h (pimephales promelas)(fathead minnow)
EC50, freshwater algae: 275 mg/L 72h (chlorella vulgaris)
EC50, water flea: 9268 mg/L 48h
EC50, water flea: 10800 mg/L 24h
IC50, bacteria: >1000 mg/L 3h (activated sludge)
EC50, microtox: 34634 mg/L 30min (photobacterium phosphoreum)
EC50, microtox: 35470 mg/L 5min (photobacterium phosphoreum)

CAS#67-63-0 Isopropyl Alcohol:

LC50, freshwater fish: 11130 mg/L 96h static (pimephales promelas)(fathead minnow)
LC50, freshwater fish: >1400000 µg/L 96h (lepomis macrochirus)(bluegill)
LC50, freshwater fish: 9640 mg/L 96h flow-through (pimephales promelas)(fathead minnow)
EC50, freshwater algae: >1000 mg/L 72h (desmodesmus subspicatus)(green algae)
EC50, water flea: 13299 mg/L 48h (daphnia magna)

CAS#67-56-1 Methyl Alcohol:

LC50, freshwater fish: 15400 mg/L 96h flow-through (lepomis macrochirus)(bluegill)
LC50, freshwater fish: 19000 mg/L 96h (oncorhynchus mykiss)(rainbow trout)
EC50, water flea: 18260 mg/L 96h semi-static (daphnia magna)
ErC50, algae: 22000 mg/L 96h static (pseudokirchneriella subcapitata)(green algae)
IC50, bacteria: >1000 mg/L 3h static (activated sludge)

CAS#7647-01-0 Hydrochloric Acid:

LC50, freshwater fish: 282 mg/L 96h (gambusia affinis)(mosquito fish)
LC50, freshwater fish: 862 mg/L (leuciscus idus)(golden orfe)
EC50, water flea: 56 mg/L 72h (daphnia magna)

Persistence and degradability: Not available.

Bio-accumulative potential: Not available.

Mobility: Will likely be mobile in the environment due to its water solubility and volatility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT

Proper shipping name: Flammable liquids, corrosive, N.O.S. (SD Alcohol & Hydrochloric Acid)

UN2924

PG II

Hazard class 3 (8)

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 1-20-26

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.