MEDICAL CHEMICAL CORPORATION
SINCE 1954

SDS for 3% Acid Alcohol
Catalog # 311A

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Section I - Product Identification

Product: A 3% v/v solution of hydrochloric acid in reagent alcohol. Reagent alcohol is a mixture of ethyl alcohol, isopropanol and methanol.

Intended Uses: This product is a laboratory reagent usually used to differentiate acid fast bacteria.

Uses advised against: For laboratory use only. Reagent alcohol is toxic and can not be made non-toxic.

Country of origin: United States.

Manufacturer Identification

Medical Chemical Corp.
19430 Van Ness Ave.
Torrance, CA 90501

Customer Service: Phone (310)787-6800
Email. customerservice@med-chem.com
FAX (310)787-4464

Emergency Telephone Number

CHEMTREC Emergency Response Telephone Number: (800)424-9300. Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

Section II - Hazard Identification

This item is considered hazardous by 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable liquid: Category 2 (H225). Highly flammable liquid and vapor.
Eye damage/eye Irritation: Category 2 (H319) Causes serious eye irritation.
Acute toxicity (Oral): Category 4 (H301). Toxic if swallowed.
Acute toxicity (Inhalation): Category 4 (H331). Toxic if inhaled.
Acute toxicity (Dermal): Category 5 (H313). May be hazardous in contact with skin.
Specific target organ toxicity (single exposure): (H336). May cause drowsiness or dizziness.

Signal word: Danger

Hazard statements

According to the harmonized classification and labeling mandated by OSHA and the EU, this substance is a highly flammable liquid and vapor, causes serious eye irritation and may cause drowsiness or dizziness. In case of skin contact immediately remove all contaminated clothing. Rinse with water or shower. In case of fire, use fire extinguishers approved for alcohol fires.

Precautionary statements

P210 Keep away from heat, sparks, open flames and 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 precautions against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands 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 clothes and eye protection
P405+P235 Store in a well-ventilated place. Keep cool..

Safety Ratings

Health: Hazardous *Flammability*: Extremely Flammable *Reactivity*: Stable *Contact*: Slight
Recommended safety equipment: safety goggles, lab coat and proper gloves
Storage: Keep cool, away from sources of ignition in a well ventilated area.

NFPA Ratings

Health = 2 Flammability = 4 Reactivity = 0

Potential Health Effects

The toxicology of this compound has not been completely examined. It is presumed that the toxicity of this item is similar to other aliphatic alcohols. Inhalation or contact with ethanol may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Exposure to methanol vapor causes eye irritation, headache, fatigue and drowsiness. High concentrations can produce central nervous system depression and optic nerve damage. Can be absorbed through skin. Swallowing methanol may cause death or eye damage.

Inhalation: Alcohols are absorbed through the mucous membranes and will produce irritation as well as the same effects as ingestion.

Ingestion: Ingestion will produce CNS disturbance, dizziness, photophobia, headache, stupor, coma and death.

Skin contact: Alcohols are absorbed through the skin. Repeated contact causes defatting of the skin with resultant irritation and flaking.

Eye contact: May be irritating.

Chronic Exposure: Unknown.

Aggravation of preexisting conditions: Impaired kidney and liver function may be aggravated by exposure to alcohols. Preexisting eye, skin, and respiratory conditions may also be aggravated. Methanol has shown genetic toxicity in some animals.

Section III - Composition/Information on Components

Ingredients	CAS#	EC/List Number	%
Ethanol	64-17-5	200-578-6	85% w/w
Isopropanol	67-63-0	200-661-7	5% w/w
Methyl alcohol	67-56-1	200-659-6	5% w/w
Hydrochloric acid	7647-01-0	231-595-7	4% w/w

Section IV - First Aid Measures

General Advice: Contact a doctor if symptoms persist

Inhalation: Remove from source of exposure and get medical attention for any breathing difficulty.

Ingestion: Do not induce vomiting. Aspiration of alcohol into the lungs may produce death. Get immediate medical attention even if symptoms improve.

Skin Contact: In case of skin contact, remove contaminated clothing and flush with water. Wash affected area with soap and water. Get medical advice if irritation develops.

Eye Contact: In case of eye contact, remove contact lenses if feasible, flush thoroughly with water and get medical attention.

Section V - Fire Fighting Measures

Fire Extinguishing Media: Alcohol foam, carbon dioxide or dry chemical. Water is ineffective against alcohol fires but may be used to cool adjacent containers.

Specific Hazards: Risk of vapor traveling to source of ignition and flashing back. Risk of exploding containers when heated. Vapor in air may form explosion risk.

Special information: Pyrolysis will release toxic carbon monoxide, formaldehyde and methanol.

Special protective gear and precautions: Self contained breathing apparatus and protective gear recommended.

Section VI - Accidental Release Measures

Use personal protective gear, remove all sources of ignition, absorb with a suitable absorbent and dispose. Take precautions against static ignition. Should not be released into the environment.

Section VII - Handling and Storage

P403+P233+P102; Store in a well-ventilated place. Keep container tightly closed. Store away from open flames or other sources of ignition. Keep out of the reach of children.

Section VIII - Exposure Control/Personal Protection

Component	ACGIH TLV	OSHA PEL	NIOSH	NIOSH IDLH
Ethanol	1000 ppm	1000 ppm	1000 ppm	3300 ppm
Isopropanol	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm	TWA: 400 ppm	2000 ppm
Methyl alcohol	TWA: 200 ppm(skin) STEL: 250 ppm	TWA 200 ppm (skin)	TWA 200 ppm (skin)	6000 ppm
Hydrochloric acid	7 ppm (Ceiling)	7 ppm (Ceiling)	5 ppm	50 ppm

Legend

ACGIH: American Conference of Governmental Industrial Hygienists.
OSHA*:* Occupational Safety and Health Administration.
NIOSH: National Institute for Occupational Safety and Health.
IDLH: Immediately dangerous to life or health.

Ventilation System: Local exhaust such as explosion proof chemical fume hoods are recommended. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.

Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

Skin protection: Protective gloves are recommended as part of good laboratory practice.

Eye Protection: Laboratory safety goggles or similar products are not required but recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

Appearance and Odor: A clear colorless liquid with a the characteristic odor of ethyl and isopropyl alcohols as well as the pungent odor of hydrochloric acid.

Flammable Limits (for ethanol): LEL 3% UEL 19%
Flammable Limits (for methanol): LEL 6% UEL 36.5%
Flammable Limits (for isopropanol): LEL 2% UEL 12%

Flash point: 13 °C (55 °F) TCC
Boiling Point: 172 °F (78 °C)
Density: 0.805 g/ml @ 22.5 °C
Evaporation Rate (Ethanol = 1): 1
Partition coefficient (*n*-Octanol/Water): No data
Solubility: Infinitely miscible with water
Vapor density (air = 1): 1.6
Volatile organic carbon (VOC):764 g/l

Auto ignition temperature: No data
Boiling point range: No data
Decomposition temperature: No data
Melting point: No data
pH: Not applicable
Vapor pressure (mm Hg): 40 @ 20 °C
Viscosity: No data

Section X - Stability and Reactivity

Stability: Stable under normal conditions.

Hazardous Decomposition Products: Nothing unusual.

Hazardous polymerization: Will not occur.

Incompatibilities: Oxidizers.

Conditions to avoid: heat, flame and sources of ignition.

Section XI - Toxicological Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	10470 mg/kg (Rat)	No data	5900 mg/m^3/6 h (Rat)
Isopropanol	>4700 mg/kg (Rat)	13,000 mg/kg (Rabbit	19,000 ppm/8h (Rat)
Methyl alcohol	5628 mg/kg (Rat)	15,800 mg/kg (Rabbit)	64,000 ppm/4h (Rat)
Hydrochloric Acid	238 mg/kg (Rat)	5,010 mg/kg (Rabbit)	3124 ppm/hour (Rat)

Cancer lists

Ingredient	*Known Carcinogenicity?*	*NTP?*	*Anticipated?*	*IARC Category*
Ethanol	No	No	No	None
Methanol	No	No	No	None
Isopropanol	No	No	No	3
Hydrochloric acid	No	No	No	None

Section XII - Ecological Information

Aliphatic alcohols evaporate quickly and are not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The half-life for ethanol in the atmosphere is one to ten days.

Environmental Fate: Biodegradable
Soil Mobility: Unknown

Environmental Toxicity: Low.

Ethyl alcohol

Toxicity to freshwater fish (fathead minnow):LC50 = 14200 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 9268 mg/l, 48 h
Toxicity to freshwater algae (Chlorella vulgaris): EC50 = 275 mg/l, 72 h

Methanol

Toxicity to freshwater fish (blue gill):LC50 = 15,400 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 18,260 mg/l, 96 h
Toxicity to freshwater algae (Pseudokirchneriella subcapitata): EC50 = 22,000 mg/l, 72 h

Isopropanol

Toxicity to freshwater fish (blue gill):LC50 = 9640 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 1000 mg/l, 48 h
Toxicity to freshwater algae (Pseudokirchneriella subcapitata): EC50 = >1000 mg/l, 72 h

Hydrochloric Acid

Toxicity to freshwater fish (mosquito fish):LC50 = 282 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = <56 mg/l, 48 h
Toxicity to freshwater algae (Pseudokirchneriella subcapitata):No data

Section XIII - Disposal Considerations

Incineration at a licensed chemical disposal facility is the preferred disposal method. Local governments often restrict the amounts of alcohol and other flammable liquids that may be flushed down the drain. The usual rule is that effluent exiting the building can't be flammable but specific chemicals may also be forbidden. Dispose of contents and container in accord with all applicable federal, state and local regulations.

Section XIV - Transportation Information

Bottles smaller than 32 Fl. Oz. are eligible to be shipped under limited quantity exemptions [49 CFR section 173.150(b)(2), 173.150(C) and IATA Y341].

DOT
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid

IATA
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid

IMDG
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid EMS-No: F-E, S-D

Section XV - Regulatory Information

Chemical Inventory Status

Ingredient	*TSCA*	*EC*
Ethanol	Yes	Yes
Methanol	Yes	Yes
Isopropanol	Yes	Yes
Hydrochloric Acid	Yes	Yes

Federal, State and International Regulations

Ingredient	SARA 302 RQ	SARA 302 TPQ	SARA 313 List	SARA 313 Category	RCRA 261.33	TSCA 8(D)	Ca. Prop 65
Ethanol	No	No	No	No	No	No	No
Isopropanol	No	No	Yes	No	No	No	No
Methanol	No	No	Yes	No	U154	No	Yes
Hydrochloric Acid	No	No	Yes	No	No	Yes	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes

SARA 311/312

Acute:	Yes
Chronic:	No
Fire:	Yes
Pressure:	No
Reactivity:	No

⚠ This product contains 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.

Section XVI - Other Information

This information is believed to be correct at the time of publication but is not guaranteed as such, nor does it purport to be all inclusive. Medical Chemical Corp. assumes no liability for the accuracy or completeness of the information. The user assumes all responsibility for compliance with federal, state and local laws.

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