

MATERIAL SAFETY DATA SHEET

3% HCl IN 95% ETHANOL
CAROLINA BIOLOGICAL

Revised: 10/13/09
Replaces: 05/15/08
Printed: 08/03/10

1. PRODUCT DESCRIPTION

Product Name: Acid Alcohol, 3%in 95%
Product Code(s): 84-1733, 15-4708A, 15-4708CA, 89-2305
Size: 500ml
Chemical Name: Does not apply, product is a mixture
CAS Number: Does not apply, product is a mixture
Formula: See section 2
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components: Hydrochloric Acid (CAS# 7647-01-0) 3%
Ethanol (CAS# 64-17-5) 87.55%
Methyl isobutyl Ketone (CAS# 108-10-1) 3.68%
Hexane (CAS# 110-54-3) 0.92%

TLV and PEL units:

Hydrochloric Acid -ACGIH-TLV 2ppm Ceiling; OSHA-PEL 5ppm Ceiling
Ethanol-ACGIH-TLV 1,000ppm(TWA); OSHA-PEL 1,000ppm(TWA)
Methyl Isobutyl Ketone-ACGIH-TLV 50ppm(TWA); 75ppm (STEL)
OSHA-PEL 100ppm(TWA)
Hexane -ACGIH-TLV 50ppm(TWA); OSHA-PEL 500ppm(TWA)

3. HAZARD IDENTIFICATION

Emergency Overview: May cause irritation to eyes and skin. Harmful if swallowed or inhaled.

Potential Health Effects:

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.

Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - If swallowed, if conscious, give some water. Do not induce vomiting unless and until directed by medical personnel. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm and quiet, and get medical attention.

5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): 13°C (ethanol) (Closed Cup)

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NFPA Rating (ethanol): Health: 2
Fire: 3
Reactivity: 0

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: No data available

Autoignition Temperature: Ethanol 363°C

Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Vapor may travel distances to ignition sources. Closed containers exposed to excessive heat may explode.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store in a suitable area for highly flammable liquids.

Other Precautions: Keep away from oxidizing materials and strong acids.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection(Specify Type):

A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust: Preferred

Mechanical(General): Accepted

Special: No

Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab apron, eye wash, and safety shower.

9. PHYSICAL DATA

Molecular Weight: No data available

Melting Point: No data available

Boiling Point: 78.5°C (Ethanol)

Vapor Pressure: No data available

Vapor Density(Air=1): Greater than 1

Specific Gravity(H2O=1): 0.79 (Ethanol)

Percent Volatile by Volume: 100%

Evaporation Rate(BuAc=1): Greater than 1

Solubility in Water: Miscible

Appearance and Odor: Clear, colorless liquid with a characteristic odor of alcohol.

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10. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Heat, flame, and ignition sources.
Incompatibility(Materials to Avoid): Oxidizers
Hazardous Decomposition Products: COx
Hazardous Polymerization: Will not occur

11. TOXICITY DATA

Toxicity Data:

Hydrochloric Acid - Oral Rat LD50: 700 mg/kg
Ethanol - Oral Rat LD50: 7,060 mg/kg
Methyl Isobutyl Ketone - Oral Rat LD50: 2,080 mg/kg
Hexane - Oral Rat LD50: 25 g/kg

Effects of Overexposure:

Acute: See section 3

Hydrochloric Acid: Mutation and reproductive data cited. Not listed as causing cancer by NTP, IARC or OSHA.

Ethanol: Mutation, tumorigenic and reproductive data cited.

Not listed as causing cancer by IARC, NTP, or OSHA.

Methyl Isobutyl Ketone: No chronic effects data found. Not listed as causing cancer by IARC, NTP, or OSHA.

Hexane: Mutation and reproductive data cited. Not listed as causing cancer by IARC, NTP, or OSHA.

Conditions Aggravated by Overexposure: Preexisting liver, skin, and eye disorders.

Target Organs: Skin and liver.

Primary Route(s) of Entry: Inhalation, Ingestion, eye and skin contact.

12. ECOLOGICAL DATA

EPA Waste Numbers: Hydrochloric Acid D002
Methyl Isobutyl Ketone U161

13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations.
Always contact a permitted waste disposer (TSD) to assure compliance.

14. TRANSPORT INFORMATION

Description: Flammable liquid, corrosive, n.o.s.(ethanol, hydrochloric acid), 3, UN2924, II

15. REGULATORY INFORMATION

EPA TSCA Status: The components are all on the TSCA inventory
Hazard Category for SARA Section 311/312 Reporting: Acute, Chronic, Fire
SARA EHS Section 302 TPQ(lbs.)
Hydrochloric Acid No
Ethanol No
Methyl Isobutyl Ketone No
Hexane No

SARA Section 313 Chemicals	Name List:	Chemical Category:
Hydrochloric Acid	Yes	No
Ethanol	No	No
Methyl Isobutyl Ketone	Yes	No

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Hexane	No	No
CERCLA Section 103		RQ(lbs.):
Hydrochloric Acid		5,000
Ethanol		No
Methyl Isobutyl Ketone		5,000
Hexane		No
RCRA		Section 261.33:
Hydrochloric Acid		No
Ethanol		No
Methyl Isobutyl Ketone		Yes
Hexane		No

16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists
CAS Number..Chemical Abstracts Service Number
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act
DOT.....U.S. Department of Transportation
IARC.....International Agency of Research on Cancer
mppcf.....million particles per cubic foot
N/A.....Not Available
NTP.....National Toxicology Program
OSHA.....Occupational Safety and Health Administration
PEL.....Permissible Exposure Limit
ppm.....parts per million
RCRA.....Resource Conservation and Recovery Act
SARA.....Superfund Amendments and Reauthorization Act
TLV.....Threshold Limit Value
TSCA.....Toxic Substances Control Act