

MATERIAL SAFETY DATA SHEET

ACETALDEHYDE
Carolina Biological Supply Company

Revised: 04/10/08
Replaces: 02/07/08
Printed: 05/20/08

1. PRODUCT DESCRIPTION

Product Name: Acetaldehyde
Product Code(s): 84-1200
Size: 100g
Chemical Name: Acetaldehyde
CAS Number: 75-07-0
Formula: CH₃CHO
Synonyms: Ethyl Aldehyde; Ethanal; Acetic Aldehyde
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: Acetaldehyde (CAS#75-07-0) 100%
TLV and PEL units: ACGIH-TLV 25 ppm (Ceiling)
OSHA-PEL 200 ppm(TWA); 360 mg/m³(TWA)

3. HAZARD IDENTIFICATION

Emergency Overview: Severe irritant to eyes; irritant to skin.
Breathing vapors may be irritating to respiratory tract.
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 at once.
Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention at once.
Ingestion - Do not induce vomiting. If swallowed, if conscious, give water immediately and get medical attention at once. 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 at once.

5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): -39°C (cc)
NFPA Rating: Health: 3
Fire: 4
Reactivity: 2

Extinguisher Media:

Use dry chemical, CO₂ or appropriate foam.

Flammable Limits in Air % by Volume: 4.1%LEL 55%UEL

Autoignition Temperature: 175°C

Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: No data available

MATERIAL SAFETY DATA SHEET

ACETALDEHYDE
Carolina Biological Supply Company

Revised: 04/10/08
Replaces: 02/07/08
Printed: 05/20/08

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 cool, dry, well-ventilated area suitable for storage of flammable materials. Store away from direct heat or sunlight, ignition sources, strong oxidizers, acids, bases, amines, anhydrides, halogens, phenols, alcohols, ketones, and isocyanates. Avoid skin contact. Do not breathe vapor.

Other Precautions: Residue may make empty containers dangerous.

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. Use hood, local exhaust, or other engineering controls to keep airborne levels below PEL or TLV.

Mechanical(General): Acceptable if air exchange is sufficient to maintain airborne levels below PEL or TLV.

Special: No

Other: No

Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.

Eye Protection: Splash proof chemical safety goggles and face shield should be worn.

Other Protective Clothing or Equipment: Lab coat, apron, boots, eye wash, safety shower.

9. PHYSICAL DATA

Molecular Weight:	44.05
Melting Point:	-123.37°C
Boiling Point:	20.1°C
Vapor Pressure:	1006 hPa at 20°C
Vapor Density(Air=1):	1.52
Specific Gravity(H ₂ O=1):	0.7834 @ 18°C
Percent Volatile by Volume:	100
Evaporation Rate(BuAc=1):	49.1
Solubility in Water:	Miscible
Appearance and Odor:	Colorless liquid with fruity, pungent odor.

10. REACTIVITY DATA

Stability: Very reactive and unstable, easily oxidized or reduced. Reactions may be violent; forms acetic acid, releases heat, when exposed to air and moisture. May form unstable, explosive peroxides. May polymerize and release much heat.

Conditions to Avoid: Heat, ignition sources, air, moisture, incompatibles.

Incompatibility(Materials to Avoid): Strong oxidizers, acids, bases, amines, anhydrides, halogens, phenols, alcohols, ketones, and isocyanates.

Hazardous Decomposition Products: CO_x

MATERIAL SAFETY DATA SHEET

ACETALDEHYDE
Carolina Biological Supply Company

Revised: 04/10/08
Replaces: 02/07/08
Printed: 05/20/08

11. TOXICITY DATA

Toxicity Data: Oral Rat LD50: 1930 mg/kg
Inhalation Mouse LC50: 1500 ppm/4H
Skin Rabbit LD50: 3540 mg/kg

Effects of Overexposure:

Acute: See section 3

Chronic: Mutation and reproductive effects data cited. Cancer lists: IARC - Group 2B (Possibly carcinogenic to humans), NTP - Reasonably anticipated to be a carcinogen.

Conditions Aggravated by Overexposure: Respiratory conditions

Target Organs: Eyes, skin, and respiratory tract.

Primary Route(s) of Entry: Inhalation, ingestion or skin contact.

12. ECOLOGICAL DATA

EPA Waste Numbers: U001

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

Proper Shipping Name: Acetaldehyde, 3, UN1089, I

15. REGULATORY INFORMATION

WARNING: This product contains acetaldehyde, a chemical known to the state of California to cause cancer.

EPA TSCA Status: On the TSCA Inventory List.

Hazard Category for SARA Section 311/312 Reporting: Acute, chronic, fire, reactivity

SARA EHS Section 302 TPQ(lbs.)No

SARA Section 313 Chemicals

Name List:

Chemical Category:

Yes

No

CERCLA Section 103 RQ(lbs.): 1,000

RCRA Section 261.33: U001

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

MATERIAL SAFETY DATA SHEET

ACETALDEHYDE
Carolina Biological Supply Company

Revised: 04/10/08
Replaces: 02/07/08
Printed: 05/20/08

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