

# MATERIAL SAFETY DATA SHEET

2-PROPANOL, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: 2-Propanol, 2%  
Product Code(s): 97-2101, 97-2155  
Size: 250 mL  
Chemical Name: 2-Propanol  
CAS Number: 67-63-0  
Formula: CH<sub>3</sub>CHOCH<sub>3</sub>  
Synonyms: Isopropyl Alcohol  
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

Principle Hazardous Components: Isopropanol(cas#67-63-0) 2%  
TLV and PEL units: ACGIH-TLV 400 ppm(TWA) STEL 500 ppm  
OSHA-PEL 400 ppm(TWA)

## 3. HAZARD IDENTIFICATION

Emergency Overview: Do not ingest. Poison by ingestion and subcutaneous routes. When heated to decomposition it emits acrid smoke and fumes.  
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 plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): (TCC)53F;(TOC)63F  
NFPA Rating: Health: 1  
Fire: 3

## MATERIAL SAFETY DATA SHEET

2-PROPANOL, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Reactivity: 0

### Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: LEL: 2.5%, UEL: 12.0%

Autoignition Temperature: 852F

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: Vapors are heavier than air and can travel distances to ignition source and flash back.

## 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 absorbant and containerize for disposal.

## 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Keep away from heat, sparks, and open flame. This material should be kept in an area suitable for the storage of highly flammable liquids. Bond and ground containers when transferring liquid. Keep container closed when not in use. Do not take internally.

Other Precautions: Wash thoroughly after handling.

## 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: Yes

Mechanical(General): Yes

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 coat, eye wash, and safety shower.

## 9. PHYSICAL DATA

Molecular Weight: No data available

Melting Point: -88.5 to -89.5 C

Boiling Point: 82.5 C (180.5 F)

Vapor Pressure: 33 mm Hg at 20 C

Vapor Density(Air=1): 2.07

Specific Gravity(H2O=1): 0.7861 at 20 C

# MATERIAL SAFETY DATA SHEET

2-PROPANOL, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Percent Volatile by Volume: 99%  
Evaporation Rate(H<sub>2</sub>O=1): 2.3  
Solubility in Water: Miscible  
Appearance and Odor: Clear colorless liquid with characteristic Isopropanol odor.

## 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Heat, sparks, and open flame  
Incompatibility (Materials to Avoid): Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, isocyanates  
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide  
Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: orl-rat LD50: 5045 mg/kg, ihl-ratLDLo: 12000 ppm/8H  
Effects of Overexposure:  
Acute: See section 3  
Chronic: Isopropanol: mutation data cited, reproductive data cited.  
Not listed as causing cancer by IARC, NTP, or OSHA.  
Conditions Aggravated by Overexposure: Pre-existing conditions of the skin or eyes may be aggravated.  
Target Organs: Skin, eyes, liver, kidneys  
Primary Route(s) of Entry: No data available

## 12. ECOLOGICAL DATA

EPA Waste Numbers: 2-Propanol(D001)

## 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

Isopropanol, 3, UN1219, II, Flammable Liquid

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical List Category		
Isopropanol	No	No	Yes	No	No

# MATERIAL SAFETY DATA SHEET

2-PROPANOL, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

ALUMINUM AMMONIUM SULFATE, 12HYDRATE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Aluminum Ammonium Sulfate, 12 Hydrate  
Product Code(s): 84-3140, 84-3160, 97-2101, 97-2118  
Size: 500g  
Chemical Name: Aluminum Ammonium Sulfate  
CAS Number: 7784-26-1  
Formula:  $\text{AlNH}_4(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$   
Synonyms: Aluminum Ammonium Sulfate Dodecahydrate, Alum  
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

Principle Hazardous Components: Aluminum Ammonium Sulfate (CAS# 7784-26-1)100%  
TLV and PEL units: None established

## 3. HAZARD IDENTIFICATION

Emergency Overview: Not expected to be hazardous under normal conditions of use.  
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 plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): No data available  
NFPA Rating: Health: 1  
Fire: 0  
Reactivity: 0

## **MATERIAL SAFETY DATA SHEET**

ALUMINUM AMMONIUM SULFATE, 12HYDRATE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### Extinguisher Media:

Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: No data available

Autoignition Temperature: No data available

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.

## **6. SPILL OR LEAK PROCEDURES**

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

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

## **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Store in a tightly closed container in a cool, dry place.

Other Precautions: Do not breathe dust. Wash after handling.

## **8. SPECIAL PROTECTION INFORMATION**

Respiratory Protection(Specify Type):

None needed under normal conditions of use with adequate ventilation. NIOSH-approved equipment should be worn if PELs are exceeded.

Ventilation:

Local Exhaust: Preferred

Mechanical(General): Acceptable

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 coat, eye wash, and safety shower.

## **9. PHYSICAL DATA**

Molecular Weight: 453.33

Melting Point: 94.5C

Boiling Point: Decomposes above 280C

Vapor Pressure: Negligible as a solid

Vapor Density(Air=1): No data available

Specific Gravity(H2O=1): 1.65

Percent Volatile by Volume: Non volatile

Evaporation Rate(H2O=1): Non volatile

Solubility in Water: One gram dissolves in 7ml water, 0.5ml boiling water.

# MATERIAL SAFETY DATA SHEET

ALUMINUM AMMONIUM SULFATE, 12HYDRATE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Appearance and Odor: White crystals with no odor.

## 10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Excessive temperature and heat.

Incompatibility (Materials to Avoid): Strong oxidizers, alkalis

Hazardous Decomposition Products: Thermal decomposition or burning may produce Ammonia, Nitrous Oxide, Sulfur Dioxide.

Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: None established

Effects of Overexposure:

Acute: See section 3

Chronic: No chronic effects data found. Not listed as causing cancer by

IARC, NTP, or OSHA.

Conditions Aggravated by Overexposure: Preexisting conditions of the skin and upper respiratory tract.

Target Organs: Skin

Primary Route(s) of Entry: None indicated

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None

## 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

Non Regulated

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical Category		
Aluminum Ammonium Hydrate	No	No	No	No	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

## MATERIAL SAFETY DATA SHEET

ALUMINUM AMMONIUM SULFATE, 12HYDRATE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

AMMONIA SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 15/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Ammonium Solution, 2%  
Product Code(s): 97-2157, 97-2101  
Size: 250 ml  
Chemical Name: Ammonium Hydroxide Solution  
CAS Number: 1336-21-6  
Formula: NH<sub>4</sub>OH  
Synonyms: Ammonia Aqueous, Aqua Ammonia  
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

Principle Hazardous Components: Ammonium Hydroxide (CAS# 1336-21-6) 2%  
TLV and PEL units: As NH<sub>3</sub> ACGIH-TLV 25ppm (TWA) 35ppm  
OSHA-PEL 50ppm (TWA)

## 3. HAZARD IDENTIFICATION

Emergency Overview: Irritant. May cause burns. May be harmful if swallowed.  
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 plenty of water. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): Liquid not flammable.  
NFPA Rating: Health: 2  
Fire: 0  
Reactivity: 1

## MATERIAL SAFETY DATA SHEET

AMMONIA SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 15/05/00

---

### Extinguisher Media:

Use dry chemical, CO<sub>2</sub>, or appropriate foam.

Flammable Limits in Air % by Volume: NH<sub>3</sub> gas: LEL 16% UEL: 25%

Autoignition Temperature: NH<sub>3</sub> gas: 1204F

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: Dangerous fire hazard; emits irritating fumes and liquid can inflict burns.

## 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 absorbant and containerize for disposal.

## 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store tightly closed in a well-ventilated area away from sources of ignition and separate from oxidizers and acids.

Other Precautions: Do not breathe vapor.

## 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): Acceptable  
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 coat, eye wash, and safety shower.

## 9. PHYSICAL DATA

Molecular Weight: 35.06

Melting Point: Approximately -77C

Boiling Point: Releases NH<sub>3</sub>

Vapor Pressure: 755 at 26.7C(total)

Vapor Density(Air=1): 0.596 NH<sub>3</sub> at 15.6C

Specific Gravity(H<sub>2</sub>O=1): 0.897

Percent Volatile by Volume: 100%



## MATERIAL SAFETY DATA SHEET

AMMONIA SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 15/05/00

---

### **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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

BAKING SODA  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Baking Soda  
Product Code(s): 95-7860, 97-2101, 97-2115  
Size: Various  
Chemical Name: Sodium Bicarbonate  
CAS Number: 144-55-08  
Formula: NaHCO<sub>3</sub>  
Synonyms: Sodium Acid Carbonate  
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

Principle Hazardous Components: Sodium bicarbonate (CAS#144-558)99-100%  
TLV and PEL units: None established

## 3. HAZARD IDENTIFICATION

Emergency Overview: May cause irritation. During use avoid contact with eyes, skin, clothing. Wash thoroughly after handling. When not in use keep in tightly closed container.  
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 plenty of water. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): N/A  
NFPA Rating: Health: 0  
Fire: 0  
Reactivity: 0

## MATERIAL SAFETY DATA SHEET

BAKING SODA  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### Extinguisher Media:

Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: None

## 6. SPILL OR LEAK PROCEDURES

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

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

## 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Keep container tightly closed. Suitable for any general chemical storage area.

Other Precautions: None

## 8. SPECIAL PROTECTION INFORMATION

### Respiratory Protection(Specify Type):

None needed under normal conditions of use with adequate ventilation. NIOSH-approved equipment should be worn if PELs are exceeded.

### Ventilation:

Local Exhaust: Yes

Mechanical(General): Yes

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 coat, eye wash, and safety shower.

## 9. PHYSICAL DATA

Molecular Weight: 84.01  
Melting Point: 50 C (122 F)  
Boiling Point: N/A  
Vapor Pressure: N/A  
Vapor Density(Air=1): N/A  
Specific Gravity(H2O=1): 2.16  
Percent Volatile by Volume: 0 (21 C)  
Evaporation Rate(H2O=1): N/A  
Solubility in Water: Moderate (1-10%)  
Appearance and Odor: White crystalline powder, odorless

# MATERIAL SAFETY DATA SHEET

BAKING SODA  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Heat, humidity  
Incompatibility(Materials to Avoid): None  
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide  
Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: Oral-Rat LD50: 4220 mg/kg  
Effects of Overexposure:  
    Acute: See section 3  
    Chronic: None  
Conditions Aggravated by Overexposure: Skin and eye irritation  
Target Organs: None  
Primary Route(s) of Entry: Skin and eye contact.

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None

## 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

Non-regulated

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical List Category		
Sodium- Bicarbonate	No	No	No	No	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

## MATERIAL SAFETY DATA SHEET

BAKING SODA  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# **MATERIAL SAFETY DATA SHEET**

COPPER SULFATE, 5 %  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

## **1. PRODUCT DESCRIPTION**

Product Name: Copper Sulfate, 5 %  
Product Code(s): 20-2500, 20-2501  
Size: 30 ml  
Chemical Name: Does not apply--product is a mixture  
CAS Number: See individual elements below.  
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**

Principle Hazardous Components: Copper Sulfate (CAS# 7758-98-7) 5%  
TLV and PEL units: Copper Sulfate: ACGIH-TLV 1 mg(Cu)/m3 (TWA)  
OSHA-PEL 1 mg(Cu)/m3 (TWA)

## **3. HAZARD IDENTIFICATION**

Emergency Overview:  
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 plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## **5. FIREFIGHTING PROCEDURES**

Flash Point (Method Used): No information available  
NFPA Rating: Health: 1  
Fire: 0  
Reactivity: 0

## **MATERIAL SAFETY DATA SHEET**

COPPER SULFATE, 5 %  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

### Extinguisher Media:

Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: Not flammable

Autoignition Temperature: None

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: No information available

## **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 absorbant and containerize for disposal.

## **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Store in a tightly closed container when not in use. Avoid prolonged inhalation of vapors. Do not get in eyes, on skin, or on clothing.

Other Precautions: Wash thoroughly after handling. Do not take internally.

## **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): Acceptable  
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 coat, eye wash, and safety shower.

## **9. PHYSICAL DATA**

Molecular Weight: No information available

Melting Point: No information available

Boiling Point: No information available

Vapor Pressure: No information available

Vapor Density(Air=1): No information available

Specific Gravity(H2O=1): No information available

Percent Volatile by Volume: 80%

Evaporation Rate(H2O=1): No information available

## MATERIAL SAFETY DATA SHEET

COPPER SULFATE, 5 %  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

Solubility in Water: Complete, product is an aqueous solution  
Appearance and Odor: Blue, odorless liquid.

### 10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Extreme temperatures

Incompatibility (Materials to Avoid): Strong oxidizers, Mg.

Hazardous Decomposition Products: Oxides of carbon

Hazardous Polymerization: Will not occur

### 11. TOXICITY DATA

Toxicity Data:

Effects of Overexposure:

Acute: See section 3

Chronic: Copper Sulfate: Mutation data cited. Reproductive effects data cited. Tumorigenic data cited. Not listed as causing cancer by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: No information available

Target Organs: No information available

Primary Route(s) of Entry: No information available

### 12. ECOLOGICAL DATA

EPA Waste Numbers: None

### 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

Environmentally hazardous substances, liquid, n.o.s. (contains copper sulfate), 9, UN3082, III Label(s) required: CLASS 9

### 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical List Category		
Copper Sulfate, 20%	No	No	Copper compounds	10	No

## MATERIAL SAFETY DATA SHEET

COPPER SULFATE, 5 %  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

### 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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

DETERGENT SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Detergent Solution, 2%  
Product Code(s): 97-2156, 97-2101  
Size: 250 ml  
Chemical Name: Sodium Carbonate  
CAS Number: 5968-11-6  
Formula: NaCO3 . H2O  
Synonyms: Sodium Carbonate  
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

Principle Hazardous Components: Sodium Carbonate (CAS#5968-11-6) 2%  
TLV and PEL units: None established

## 3. HAZARD IDENTIFICATION

Emergency Overview: Causes skin and eye irritation. Harmful if swallowed.  
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 plenty of water. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): Non-combustible  
NFPA Rating: Health: 1  
Fire: 0  
Reactivity: 0

Extinguisher Media:

## MATERIAL SAFETY DATA SHEET

DETERGENT SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: None

### 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 absorbant and containerize for disposal.

### 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store in a cool, dry place away from acid or acid fumes. Keep container tightly closed when not in use. Wash thoroughly after handling.

### 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: Yes  
Mechanical(General): Yes  
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 coat, eye wash, and safety shower.

### 9. PHYSICAL DATA

Molecular Weight: N/A  
Melting Point: N/A  
Boiling Point: N/A  
Vapor Pressure: N/A  
Vapor Density: N/A  
Specific Gravity(H<sub>2</sub>O=1): N/A  
Percent Volatile by Volume: N/A  
Evaporation Rate(H<sub>2</sub>O=1): N/A  
Solubility in Water: 33g PER 100 ML @ 20C  
Appearance and Odor: Clear solution.

# MATERIAL SAFETY DATA SHEET

DETERGENT SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Contact with strong acid may result in violent reaction.  
Incompatibility (Materials to Avoid): Acids cause decomposition, liberating gaseous carbon dioxide, Aluminum, Fluorine, Phosphorus Pentoxide, Lithium.  
Hazardous Decomposition Products: Carbon dioxide(CO2), Na2O  
Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: No toxicity data available  
Effects of Overexposure:  
    Acute: See section 3  
    Chronic: No chronic effects data found. Material is not listed (NTP, IARC, OSHA) as causing cancer agents.  
Conditions Aggravated by Overexposure: Respiratory conditions  
Target Organs: Skin, nose, eyes, throat  
Primary Route(s) of Entry: Inhalation, ingestion, eyes, skin

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None

## 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

Non-regulated

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS	SARA Sec. 313		CERCLA	RCRA
	Sec. 302	Name	Chemical	Sec. 103	Sec.
	TPQ	List	Category	RQ lbs.	261.33
Sodium Carbonate	No	No	No	No	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

## MATERIAL SAFETY DATA SHEET

DETERGENT SOLUTION, 2%  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

DIATOMACEOUS EARTH  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Diatomaceous Earth  
Product Code(s): 85-7570, 67-1892A  
Size: 500 g, 10 lb.  
Chemical Name: See Section 2  
CAS Number: 68855-54-9  
Formula: Predominantly SiO<sub>2</sub>  
Synonyms: Diatomite, Kieselguhr  
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

Principle Hazardous Components: Diatomaceous Earth, Flux-calcined  
(CAS#68855-54-9) 100%  
TLV and PEL units: ACGIH-TLV: 10 mg/m<sup>3</sup> total nuisance dust  
OSHA-PEL: 0.05 mg/m<sup>3</sup> respirable

## 3. HAZARD IDENTIFICATION

Emergency Overview: CAUTION! Harmful dust  
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 plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): Not flammable  
NFPA Rating: Health: 0  
Fire: 0

## MATERIAL SAFETY DATA SHEET

DIATOMACEOUS EARTH  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

Reactivity: 0

### Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: No information available

Autoignition Temperature: No information available

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: No known hazard

## 6. SPILL OR LEAK PROCEDURES

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

DO NOT BREATHE DUST. Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

## 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store in a dry place. Avoid breathing dust. Wash thoroughly after handling.

Other Precautions: Use with adequate ventilation. Remove and wash contaminated clothing.

## 8. SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):

None needed under normal conditions of use with adequate ventilation. NIOSH-approved equipment should be worn if PELs are exceeded.

Ventilation:

Local Exhaust: Recommended

Mechanical(General): Recommended

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 coat, eye wash, and safety shower.

## 9. PHYSICAL DATA

Molecular Weight: No information available

Melting Point: Non-volatile solid

Boiling Point: Not applicable

Vapor Pressure: Not applicable

Vapor Density(Air=1): Not applicable

Specific Gravity(H2O=1): 2.33

Percent Volatile by Volume: Not applicable

Evaporation Rate(H2O=1): Not applicable

# MATERIAL SAFETY DATA SHEET

DIATOMACEOUS EARTH  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

Solubility in Water: Slight  
Appearance and Odor: Dry, white powder; no odor

## 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: None known  
Incompatibility (Materials to Avoid): Hydrofluoric Acid  
Hazardous Decomposition Products: None known  
Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: None cited  
Effects of Overexposure: Inhalation of silica dust over long periods may be harmful; i.e., cause pneumoconiosis. May cause upper respiratory irritation or soreness in throat and nose. In extreme heat exposures some congestion may occur.  
Acute: See section 3  
Chronic: Carcinogenic effects data cited  
Conditions Aggravated by Overexposure: No information available  
Target Organs: No information available  
Primary Route(s) of Entry: Eyes

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None

## 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

non-regulated

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical List Category		
Diatomaceous Earth	No	No	No	No	No

## 16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a

## MATERIAL SAFETY DATA SHEET

DIATOMACEOUS EARTH  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 01/06/00

---

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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

IODINE TINCTURE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Iodine Tincture  
Product Code(s): 86-9121, 86-9123, 84-0520  
Size: 100 ml, 500 ml  
Chemical Name: Product is a mixture  
CAS Number: See section 2  
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

Principle Hazardous Components: Ethanol (CAS#64-17-5) 48%  
Iodine (CAS#7553-56-2) 2%  
Sodium Iodide (CAS#7681-82-5) 2.4%  
Methyl isobutyl ketone (CAS#108-10-1) 4%

TLV and PEL units: Ethanol ACGIH TLV:1000 ppm  
OSHA PEL: 1000ppm  
Iodine ACGIH TLV: 0.1 ppm  
OSHA PEL: 0.1ppm (TWA) ceiling  
Methyl isobutyl ketone ACGIH TLV: 50 ppm  
OSHA PEL: 50ppm STEL 75ppm

## 3. HAZARD IDENTIFICATION

Emergency Overview:  
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 plenty of water. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## MATERIAL SAFETY DATA SHEET

IODINE TINCTURE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### 5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): 54 F

NFPA Rating: None established

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: 3.3-19 (ethanol)

Autoignition Temperature: 793 F

Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: Flammable. Vapors are heavier than air and may travel distances to an ignition source and flash back.

### 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 absorbant and containerize for disposal.

### 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store away from heat, sparks, and open flame in a tightly closed container.

Other Precautions: Do not ingest.

### 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: Yes

Mechanical(General): No

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 coat, eye wash, and safety shower.

### 9. PHYSICAL DATA

Molecular Weight: 500 ml

Melting Point: No information available

Boiling Point: No information available

Vapor Pressure: No information available

## MATERIAL SAFETY DATA SHEET

IODINE TINCTURE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Vapor Density(Air=1): 1.59 (ethanol)  
Specific Gravity(H2O=1): No information available  
Percent Volatile by Volume: 95%  
Evaporation Rate(H2O=1): Grater than 1  
Solubility in Water: Completely  
Appearance and Odor: Dark brown liquid with fruity odor

### 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Heat, sparks, open flame  
Incompatibility (Materials to Avoid): Oxidizers  
Hazardous Decomposition Products: Thermal decomposition may produce carbon dioxide and/or carbon monoxide.  
Hazardous Polymerization: Will not occur

### 11. TOXICITY DATA

Toxicity Data: Ethanol orl-rat LD50: 7060mg/kg  
Methyl Isobutyl Ketone orl-rat LD50: 5080mg/kg  
Iodine orl-rat LD50: 14g/kg  
Sodium Iodide orl-rat LD50: 4340mg/kg

Effects of Overexposure:

Acute: See section 3

Chronic: May cause respiratory problems, headache, nausea, and diarrhea

Breathing vapors may cause drowsiness.

Conditions Aggravated by Overexposure: May cause irritation to eyes, skin, and respiratory tract.

Target Organs: Respiratory

Primary Route(s) of Entry: Ingestion

### 12. ECOLOGICAL DATA

EPA Waste Numbers: D002 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 liquids, n.o.s.(ethanol, methyl isobutyl ketone),3,  
UN1993, II

### 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

**MATERIAL SAFETY DATA SHEET**

IODINE TINCTURE  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name List	Chemical Category		
Ethanol	No	No	No	No	No
Iodine	No	No	No	No	No
Sodium Iodide	No	No	No	No	No
Methyl Isobutyl Ketone	No	Yes	No	5000	Yes

**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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

RED CABBAGE SOLUTION  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Red Cabbage Solution  
Product Code(s): 97-2101, 97-2141  
Size: 250 mL  
Chemical Name: None  
CAS Number: 67-63-0  
Formula: CH<sub>3</sub>CHOOCH<sub>3</sub>  
Synonyms: Isopropyl Alcohol  
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

Principle Hazardous Components: Isopropanol (CAS#67-63-0) 14.2%  
Naugard BHT(2,6-di-tert-butyl-p-cresol) (CAS#128-37-0) 2.5%  
TLV and PEL units: IPA: ACGIH-TLV 400 ppm(TWA) STEL 500 ppm  
OSHA-PEL 400 ppm(TWA)  
Naugard BHT: ACGIH-TLV 10mg/m<sup>3</sup>  
OSHA-PEL 10mg/m<sup>3</sup>

## 3. HAZARD IDENTIFICATION

Emergency Overview: Do not ingest. Poison by ingestion and subcutaneous routes. When heated to decomposition it emits acrid smoke and fumes.  
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 plenty of water and induce vomiting immediately as directed by medical personnel. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## MATERIAL SAFETY DATA SHEET

RED CABBAGE SOLUTION  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): (TCC)53F;(TOC)63F (IPA)

NFPA Rating: None established

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: IPA LEL: 2.5%, UEL: 12.0%

Autoignition Temperature: N/A

Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: Vapors are heavier than air and can travel distances to ignition source and flash back.

### 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 absorbant and containerize for disposal.

### 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Keep away from heat, sparks, and open flame. This material should be kept in an area suitable for the storage of highly flammable liquids. Bond and ground containers when transferring liquid. Keep container closed when not in use. Do not take internally.

Other Precautions: Wash thoroughly after handling.

### 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: Yes

Mechanical(General): Yes

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 coat, eye wash, and safety shower.

### 9. PHYSICAL DATA

Molecular Weight: No data available

Melting Point: N/A

Boiling Point: N/A

Vapor Pressure: N/A

## MATERIAL SAFETY DATA SHEET

RED CABBAGE SOLUTION  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Vapor Density(Air=1): N/A  
Specific Gravity(H2O=1): N/A  
Percent Volatile by Volume: N/A  
Evaporation Rate(H2O=1): N/A  
Solubility in Water: N/A  
Appearance and Odor: Cloudy, burgundy-like color with a cooked cabbage odor.  
Isopropanol odor.

### 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Heat, sparks, and open flame  
Incompatibility(Materials to Avoid): Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, isocyanates  
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide  
Hazardous Polymerization: Will not occur

### 11. TOXICITY DATA

Toxicity Data:  
Isopropanol orl-rat LD50: 5045 mg/kg, ihl-ratLDLo: 12000 ppm/8H  
Naugard BHT orl-rat LD50: >890 mg/kg  
Effects of Overexposure:  
Acute: See section 3  
Chronic: IPA and Naugard: mutation data cited, reproductive data cited.  
Not listed as causing cancer by IARC, NTP, or OSHA.  
Conditions Aggravated by Overexposure: Pre-existing conditions of the skin or eyes may be aggravated.  
Target Organs: Skin, eyes, liver, kidneys  
Primary Route(s) of Entry: No data available

### 12. ECOLOGICAL DATA

EPA Waste Numbers: 2-Propanol(D001)

### 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

Isopropanol, 3, UN1219, II, Flammable Liquid

### 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute

# MATERIAL SAFETY DATA SHEET

RED CABBAGE SOLUTION  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name List	Chemical Category		
Isopropanol	No	No	Yes	No	No
Naugard BHT	No	No	No	No	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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

TALC BABY POWDER  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Talc  
Product Code(s): 97-2116, GEO3739, GEO3739A, 95-8002, 95-8005  
Size: Various  
Chemical Name: Hydrous Magnesium Silicate  
CAS Number: 14807-96-6  
Formula:  $H_2O_3Si_{3/4}Mg$   
Synonyms: None  
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

Principle Hazardous Components: Talc(CAS# 14807-96-6) 100%  
TLV and PEL units:  
Talc: ACGIH-TLV: 2 mg/cu meter (TWA)  
OSHA-PEL: 20 ppm

## 3. HAZARD IDENTIFICATION

Emergency Overview: Prolonged inhalation may cause damage to lungs.  
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 plenty of water. Immediately call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): None  
NFPA Rating: Health: 1  
Fire: 0  
Reactivity:0  
Page 1 of 4

## **MATERIAL SAFETY DATA SHEET**

TALC BABY POWDER  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

Special Firefighting Procedures: None determined

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

Unusual Fire and Explosion Hazards: None determined

### **6. SPILL OR LEAK PROCEDURES**

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

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

### **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Keep container tightly closed. Do not breathe dust. Do not get in eyes.

Other Precautions:

### **8. SPECIAL PROTECTION INFORMATION**

Respiratory Protection(Specify Type): None required with adequate ventilation under normal conditions.

Ventilation:

Local Exhaust: Yes

Mechanical(General): Yes

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 coat, eye wash, and safety shower

### **9. PHYSICAL DATA**

Molecular Weight: 96.33

Melting Point: N/A

Boiling Point: N/A

Vapor Pressure: N/A

Vapor Density(Air=1): N/A

Specific Gravity(H2O=1): 2.7

Percent Volatile by Volume:0

Evaporation Rate(H2O=1): N/A

Solubility in Water: Negligible(<0.1%)

Appearance and Odor: White-yellow powder

# MATERIAL SAFETY DATA SHEET

TALC BABY POWDER  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 10. REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: Dusting  
Incompatibility(Materials to Avoid): None determined  
Hazardous Decomposition Products: MgOx  
Hazardous Polymerization: Will not occur

## 11. TOXICITY DATA

Toxicity Data: None determined. Tests on laboratory animals indicate material may cause tumors.  
Effects of Overexposure:  
    Acute: See section 3  
    Chronic: Lung Damage  
Conditions Aggravated by Overexposure: Chronic respiratory disease  
Target Organs: Respiratory system, lungs  
Primary Route(s) of Entry: Inhalation, ingestion, skin contact, eye contact

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None assigned

## 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

N/A

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory: Yes  
Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS	SARA Sec. 313	CERCLA	RCRA
	Sec. 302	Name Chemical List Category	Sec. 103 RQ lbs.	Sec. 261.33
Talc	No	No No	No	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.

## MATERIAL SAFETY DATA SHEET

TALC BABY POWDER  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

### Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists  
CAS Number..Chemical Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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

# MATERIAL SAFETY DATA SHEET

VINEGAR  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

## 1. PRODUCT DESCRIPTION

Product Name: Vinegar  
Product Code(s): 89-8110, 84-0935, 84-0975, 95-7860, 97-2901, 97-2923  
84-0477, 95-8005, 84-0486, 84-0487, 84-0880, 84-0884  
95-8002  
Size: 7 mL, 500 ml  
Chemical Name: Acetic Acid  
CAS Number: 64-19-7  
Formula: CH<sub>3</sub>COOH  
Synonyms: Ethanoic Acid  
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

Principle Hazardous Components: Acetic Acid (CAS#64-19-7) 4-6%  
TLV and PEL units: ACGIH-TLV 10ppm(TWA), STEL 15ppm  
OSHA-PEL 10ppm(TWA)

## 3. HAZARD IDENTIFICATION

Emergency Overview: Do not ingest. Avoid skin and eye contact. Avoid exposure to vapors or mists.  
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 - Do not induce vomiting. If swallowed, if conscious, give plenty of water immediately and call a physician or poison control center. 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, quiet, and get medical attention.

## 5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): 109F (cc)  
NFPA Rating: Health: 2

## MATERIAL SAFETY DATA SHEET

VINEGAR  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Fire: 2  
Reactivity: 1

### Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: 5.4%LEL 16.0%UEL

Autoignition Temperature: No data available

### Special Firefighting Procedures:

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

Unusual Fire and Explosion Hazards: No data available

## 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 absorbant and containerize for disposal.

## 7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store above 62F, away from direct heat, ignition sources and oxidizers.

Other Precautions: Do not reuse container. 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

Mechanical(General): Acceptable

Special: No

Other: No

Protective Gloves: Natural rubber, Neoprene, PVC or equivalent

Eye Protection: Splash-proof chemical safety goggles should be worn.

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

## 9. PHYSICAL DATA

Molecular Weight: 60.05  
Melting Point: 16.7C  
Boiling Point: 118.1C  
Vapor Pressure: 11.4 at 20C  
Vapor Density(Air=1): 2.07  
Specific Gravity(H2O=1): 1.049  
Percent Volatile by Volume: 100  
Evaporation Rate(BuAc=1): 0.97  
Solubility in Water: Miscible

## MATERIAL SAFETY DATA SHEET

VINEGAR  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

Appearance and Odor: Clear colorless liquid with pungent odor.

### 10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Heat, ignition sources, metals

Incompatibility(Materials to Avoid): Oxidizers, strong alkalies, metals, amines, cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, carbonates

Hazardous Decomposition Products: COx

Hazardous Polymerization: Will not occur

### 11. TOXICITY DATA

Toxicity Data: ihl-mus LC50: 5620 ppm/1H orl-rat LD50: 3530 mg/kg  
skin-rbt LD50: 1060 mg/kg

Effects of Overexposure:

Acute: See section 3

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

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: D002 D001

### 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

DOT Proper Shipping Name: Non-regulated

### 15. REGULATORY INFORMATION

EPA TSCA Status: On the TSCA Inventory List.

Hazard Category for SARA Section 311/312 Reporting: Acute

SARA EHS Section 302 TPQ(lbs.)No

SARA Section 313 Chemicals

Name List:

Chemical Category:

No

No

CERCLA Section 103 RQ(lbs.): 5,000

RCRA Section 261.33: No

### 16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a

## MATERIAL SAFETY DATA SHEET

VINEGAR  
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00  
Replaces: None  
Printed: 22/05/00

---

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 Services Abstract Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
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