

Students,

Please have your Dr. look over these MSDS sheets and then return the ***“Student Medical Release Form”*** to your instructor before you can continue with lab. GPC cannot be responsible for medical problems due to conditions that may be compromised by contact with chemicals that are used in our labs.

If you are pregnant, trying to get pregnant, or suffer from an immune deficiency problem, you need to have the medical form filled out by your doctor and submitted to your instructor at the time of your next lab. If you have any other health issue that you feel that you would want your Dr. to clear you on, please have them review the MSDS sheets and contact you if they foresee any problems. They can also fill out the medical form and email it back to you.

If you have any questions, please feel free to contact me, Mrs. J. Peiffer at 678-891-3753

Thanks,

J. Peiffer
Biology Lab Supervisor
GPC – Clarkston campus
555 North Indian Creek Drive
Clarkston, Ga. 30021



Student Medical Release Form

I, Dr. _____ hereby release _____
(Print name) (Student name)

to attend _____ Lab at Georgia Perimeter College for _____
(Lab name & number—e.g. Biology 1402) (Semester & year-e.g. Fall 09).

By signing this release form, you are stating that the chemicals listed in this packet are safe for this individual to be in contact with or be in close proximity of it.

Dr.'s Signature

Date

Please return this form to your instructor, who will then make a copy of it and return **the original** to the **Lab Supervisor**.

Science Department
Georgia Perimeter College
555 North Indian Creek Drive,
Clarkston, GA-30021
678-891-3766

Material Safety Data Sheet



ACETONE ALCOHOL

Revised: 11/18/2011
Replaces: 11/17/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Acetone Alcohol

Product Code(s): 84-1533

Size: Various

Chemical Name: N/A

CAS Number: N/A

Formula: N/A

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Harmful if inhaled or swallowed.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Acetone (CAS# 67-64-1) 30%

Ethanol (CAS# 64-17-5) 66.5%

Methyl isobutyl ketone (CAS# 108-10-1) 2.8%

Hexane (CAS# 110-54-3) 0.7%

TLV units: Acetone: 500 ppm TWA; 750 STEL

Ethanol: 1000 ppm TWA

Methyl Isobutyl ketone: 50 ppm TWA; 75 ppm STEL

Hexane: 50 ppm TWA

PEL units: Acetone: 1000 ppm (TWA)

Ethanol: 1000 ppm TWA

Methyl Isobutyl ketone: 100 ppm TWA

Hexane: 500 ppm TWA

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): -20 °C (acetone)

13 °C (ethanol)

NFPA Rating:

Health: 1

Fire: 3

Reactivity: 0

Extinguisher Media: Use dry chemical, CO₂ or appropriate foam.

Flammable Limits in Air % by Volume: N/A N/A

Autoignition Temperature: Acetone - 465 °C

Ethanol - 363 °C

Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Vapours may travel back to ignition source. Closed Containers exposed to heat may explode.

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing.

Retained residue may make empty containers hazardous; use caution. Keep container tightly closed in a cool, well-ventilated place.

This material should be kept in an area suitable for the storage of flammable liquids. Store away from oxidizing agents, sparks and flame.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): > 1

Percent Volatile by Volume: 100%

Solubility in Water: Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H₂O=1): N/A

Evaporation Rate (BuAc=1): > 1

Appearance and Odor: Clear, colorless liquid with characteristic

odor.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Incompatibility (Materials to Avoid): Acids, Oxidizers,

Hazardous Decomposition Products: CO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data:

Acetone - orl rat LD50: 5800 mg/kg

Ethanol - orl rat LD50: 7060 mg/kg

Methyl Isobutyl Ketone - orl rat LD50: 2080 mg/kg

Hexane - orl rat LD50: 25 g/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA. Mutation data cited. Reproductive data cited. Tumorigenic data cited.

Conditions Aggravated by Overexposure: Respiratory disorders, Skin disorders, Eye disorders,

Target Organs: Kidneys, Liver, Skin, Eyes,

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

Section 12 - Ecological Data

EPA Waste Numbers: D001

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: UN1993, flammable liquid, n.o.s. (acetone, ethanol), 3, II

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Chronic Fire

Name List:

Acetone - Yes

Ethanol - No

Methyl Isobutyl Ketone - Yes

Hexane - No

Chemical Category:

CERCLA Section 103 RQ(lb.): Acetone - 5000 lbs

Ethanol - No

Methyl Isobutyl Ketone - 5000 lbs

Hexane - No

RCRA Section 261.33: Acetone - Yes

Ethanol - No

Methyl Isobutyl Ketone - Yes

Hexane - No

Section 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

Health: 0

Fire: 1

Reactivity: 0

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: N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container dry. Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): N/A

Percent Volatile by Volume: N/A

Solubility in Water: Slightly Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H₂O=1): N/A

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Odorless white solid.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: None Known

Incompatibility (Materials to Avoid): Oxidizers,

Hazardous Decomposition Products: N/A

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: N/A

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: Respiratory disorders, Eye disorders,

Target Organs: N/A

Primary Route(s) of Entry: Inhalation and ingestion.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

Agarose - No

Chemical Category:

Agarose - No

CERCLA Section 103 RQ(lb.): Agarose - No

RCRA Section 261.33: Agarose - No

Section 16 - Additional Information

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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



Alpha Amylase

Revised: 11/18/2011
Replaces: 10/13/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Alpha Amylase

Product Code(s): 97-4018A

Size: Various

Chemical Name: Fungal amylase

CAS Number: 9013-01-8

Formula: N/A

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Harmful if inhaled or swallowed.

Potential Health Effects:

Eyes: May cause irritation.

Skin: Non-Hazardous under normal use.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Fungal amylase

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

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 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:**Health:** 1**Fire:** 1**Reactivity:** 0**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:** N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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:** 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.

Section 9 - Physical Data

Molecular Weight: N/A**Boiling Point:** N/A**Vapor Density(Air=1):** >1**Percent Volatile by Volume:** N/A**Solubility in Water:** Soluble**Melting Point:** N/A**Vapor Pressure:** N/A**Specific Gravity (H₂O=1):** >1**Evaporation Rate (BuAc=1):** N/A**Appearance and Odor:** White, tan solid. Characteristic odor.

Section 10 - Reactivity Data

Stability: Stable**Conditions to Avoid:** Avoid dusting.**Incompatibility (Materials to Avoid):** N/A**Hazardous Decomposition Products:** N/A**Hazardous Polymerization:** Will not occur

Section 11 - Toxicity Data

Toxicity Data: N/A**Effects of Overexposure:****Acute:** See Section 2**Chronic:** N/A**Conditions Aggravated by Overexposure:** Allergies,

Target Organs: Respiratory system, Eyes,
Primary Route(s) of Entry: Inhalation and skin contact.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

Fungal amylase - No

Chemical Category:

Fungal amylase - No

CERCLA Section 103 RQ(lb.): Fungal amylase - No

RCRA Section 261.33: Fungal amylase - No

Section 16 - Additional Information

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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



Benedict's Solution, Qualitative

Revised: 11/18/2011
Replaces: 11/17/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Benedict's Solution, Qualitative

Product Code(s): 84-7111, 84-7113, 20-2340, 20-2341, 20-2345, 20-2500, 20-2501, 84-1112, 10-1026, 84-1137, 97-4038

Size: 30 mL, 120 mL, 500 mL, 4 L

Chemical Name: Does not apply, product is a mixture.

CAS Number: See Section 3

Formula: See Section 3

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** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: N/A

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Copper (II) Sulfate (CAS# 7758-98-7) 1.5%; Sodium Citrate (CAS# 68-04-2) 15.1%; Sodium Carbonate (CAS# 497-19-8) 8.7%; Water, (CAS# 7732-18-5) Balance

TLV units: ACGIH-TLV (Copper (II) Sulfate) 1 mg(Cu)/m³ (TWA)

PEL units: OSHA-PEL (Copper (II) Sulfate) 1 mg(Cu)/m³ (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 1

Fire: 0

Reactivity: 0

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: Fire or excessive heat may produce hazardous decomposition products.

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Avoid contact with skin and eyes.

Keep away from oxidizing materials and strong acids.

Avoid contact with clothing.

Do not breathe gas/fumes/vapour/spray.

Harmful if swallowed.

After contact with skin, wash immediately with plenty of water. Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: Approximately 110-120 °C

Vapor Density(Air=1): 0.7 (Water)

Percent Volatile by Volume: N/A

Solubility in Water: Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H₂O=1): 1.145 at 20 °C

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Dark Blue, odorless solution.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Incompatibility (Materials to Avoid): Acids, Oxidizers,

Hazardous Decomposition Products: NO_x, SO_x, CO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Sodium Carbonate) orl-rat LD50 4090 mg/kg
(Sodium Citrate) itp-rat LD50 1724 mg/kg
(Cupric Sulfate) orl-rat LD50 300 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA. Reproductive data cited. Mutation data cited. Tumorigenic data cited.

Conditions Aggravated by Overexposure: N/A

Target Organs: N/A

Primary Route(s) of Entry: Inhalation.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

Sodium Carbonate: No

Sodium Citrate: No

Cupric Sulfate: No

Chemical Category:

Sodium Carbonate: No

Sodium Citrate: No

Cupric Sulfate: Copper

CERCLA Section 103 RQ(lb.): Sodium Carbonate: No

Sodium Citrate: No

Cupric Sulfate: 10

RCRA Section 261.33: Sodium Carbonate: No

Sodium Citrate: No

Cupric Sulfate: No

Section 16 - Additional Information

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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



Biuret Reagent

Revised: 11/18/2011
Replaces: 11/17/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Biuret Reagent

Product Code(s): 84-8209, 84-8211, 84-8213, 84-8215, 20-2340, 20-2341, 10-1026

Size: 30 ml (1oz), 100 mL, 500 mL, 4 L

Chemical Name: See Section 3

CAS Number: See Section 3

Formula: See Section 3

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** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: **DANGER** - Causes severe burns. Harmful if swallowed.

Potential Health Effects:

Eyes: Causes severe burns and eye damage upon direct contact. Vapor is irritating.

Skin: May cause severe irritation or chemical burns.

Ingestion: May severely irritate or damage digestive tract.

Inhalation: May severely irritate or damage mucous membranes and respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Ethylene Glycol (CAS# 107-21-1) 9.3%; Copper Sulfate, 5-Hydrate (CAS# 7758-99-8) 1.7%; Sodium Hydroxide (CAS# 1310-73-2) 16.7%

TLV units: ACGIH-TLV (Cupric Sulfate, 5-Hydrate) 1 mg(Cu)/m³ (TWA)

ACGIH-TLV (Ethylene Glycol) 100 mg/m³ (Ceiling)

ACGIH-TLV (Sodium Hydroxide) 2 mg/m³ (Ceiling)

PEL units: OSHA-PEL (Cupric Sulfate, 5-Hydrate) 1 mg(Cu)/m³ (TWA)

OSHA-PEL (Ethylene Glycol) 50 ppm (Ceiling)

OSHA-PEL (Sodium Hydroxide) 2 mg/m³ (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 3

Fire: 0

Reactivity: 0

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: N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep locked up and out of the reach of children.

Avoid contact with skin.

Harmful if swallowed. Keep container tightly closed in a cool, well-ventilated place.

Store in a secure area suitable for corrosives.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust: Acceptable

Mechanical(General): Yes

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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): N/A

Percent Volatile by Volume: N/A

Solubility in Water: Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H₂O=1): N/A

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Dark Blue, odorless solution.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: None Known

Incompatibility (Materials to Avoid): Acids, Water-reactive Material,

Hazardous Decomposition Products: CO_x, Metal Fumes,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Cupric Sulfate, 5-Hydrate) orl-rat LD50 300 mg/kg
(Ethylene Glycol) ihl-hmn TCLo: 10000 mg/m³
(Ethylene Glycol) orl-hmn LDLo: 398 mg/kg
(Sodium Hydroxide) ipr-mus LD50: 40 mg/kg
(Sodium Hydroxide) orl-rbt LDLo: 500 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA. Mutation data cited.

Conditions Aggravated by Overexposure: N/A

Target Organs: Skin, Liver, Kidneys, Central Nervous System,

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

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: UN1824, Sodium hydroxide solution, 8, II

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Reaction Acute

Name List:

Cupric Sulfate, 5-Hydrate: No

Sodium Hydroxide: No

Ethylene Glycol: Yes

Chemical Category:

Cupric Sulfate, 5-Hydrate: Copper Compound

Sodium Hydroxide: No

Ethylene Glycol: No

CERCLA Section 103 RQ(lb.): Cupric Sulfate, 5-Hydrate: 10

Sodium Hydroxide: 1000

Ethylene Glycol: 5000

RCRA Section 261.33: Cupric Sulfate, 5-Hydrate: No

Sodium Hydroxide: No

Ethylene Glycol: No

Section 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



D-(+)-Maltose, Monohydrate

Revised: 01/09/2012
Replaces: 10/13/2011
Printed: 01/09/2012

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Maltose
Product Code(s): 87-3750
Size: 100 g
Chemical Name: D-(+)-Maltose, Monohydrate
CAS Number: N/A
Formula: C₁₂H₂₂O₁₁ * H₂O

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.

Potential Health Effects:

Eyes: May cause irritation.

Skin: Non-Hazardous under normal use.

Ingestion: Not expected to be harmful by ingestion.

Inhalation: No hazard under normal usage.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: N/A

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): Non-combustible

NFPA Rating:

Health: 0

Fire: 1

Reactivity: 0

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

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place. Avoid contact with eyes. Suitable for any general chemical storage.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: 360.32

Boiling Point: N/A

Vapor Density(Air=1): N/A

Volatile by Volume: N/A

Solubility in Water: Soluble

Melting Point: 102 - 103 °C

Vapor Pressure: N/A

Specific Gravity (H₂O=1): N/A Percent

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Off-white powder.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Oxidizers,

Hazardous Decomposition Products: N/A

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: N/A

Effects of Overexposure:

Acute: See Section 2

Chronic: N/A

Conditions Aggravated by Overexposure: N/A

Target Organs: N/A

Primary Route(s) of Entry: N/A

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

No

Chemical Category:

No

CERCLA Section 103 RQ(lb.): No

RCRA Section 261.33: No

Section 16 - Additional Information

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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



Dextrose, Anhydrous

Revised: 11/18/2011
Replaces: 10/13/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Dextrose, Anhydrous

Product Code(s): 17-1025, 20-2200, 20-2500, 20-2051, 85-7430, 85-7442, 85-7450, 85-7451, 85-7452, 84-0550, 84-0996, 84-0491, 10-1026, 25-1012, PD1031, C61411, C71928, C70137, C19346, C70510

Size: Various

Chemical Name: Dextrose

CAS Number: 50-99-7

Formula: C₆H₁₂O₆

Synonyms: D-Glucose, Grape Sugar, Corn Sugar

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Dextrose, Anhydrous

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 0

Fire: 1

Reactivity: 0

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

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Do not breathe dust.

Keep container dry.

After contact with skin, wash immediately with plenty of water.

Harmful if swallowed. Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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.

Section 9 - Physical Data

Molecular Weight: 198.17 g/mol

Boiling Point: Decomposes

Vapor Density(Air=1): 6.3

Percent Volatile by Volume: 0%

Solubility in Water: Slightly Soluble

Melting Point: 146 °C

Vapor Pressure: N/A

Specific Gravity (H₂O=1): 1.544

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: White, odorless crystals.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Explosive when mixed with oxidising substances.

Incompatibility (Materials to Avoid): Oxidizers,

Hazardous Decomposition Products: CO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: orl-rt LD50: 25,800 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA. Mutation data cited. Reproductive data cited.

Conditions Aggravated by Overexposure: None Known

Target Organs: No information available

Primary Route(s) of Entry: Inhalation.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

No

Chemical Category:

No

CERCLA Section 103 RQ(lb.): No

RCRA Section 261.33: No

Section 16 - Additional Information

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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



Flynap

Revised: 11/18/2011
Replaces: 10/13/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: FlyNap

Product Code(s): 17-3010, 17-3015, 17-3025, 17-3048, 17-3050, 17-3052, 17-3060, 74-6530, 17-1950, 17-1951, 17-1958, 17-1959, 17-1960, 17-1964, 17-1966, 17-1984, 17-1987, 17-1990, 17-1993

Size: 10 mL, 100 mL

Chemical Name: Product is a mixture

CAS Number: See Section 3

Formula: See Section 3

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Irritating to eyes, respiratory system and skin. May cause damage to kidneys, liver, & blood.

Potential Health Effects:

Eyes: Causes severe burns and eye damage upon direct contact. Vapor is irritating.

Skin: Causes severe burns. May cause irritation to skin.

Ingestion: Causes severe burns. May cause gastrointestinal discomfort.

Inhalation: Causes severe burns. May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Triethylamine (CAS# 121-44-8) 50%; Ethanol(CAS# 64-17-5) 25%; Fragrance (neutralizer) 25%

TLV units: Ethanol: ACGIH-TLV 1000 ppm (TWA)

Triethylamine: ACGIH-TLV 1 ppm (TWA); 3 ppm (STEL) (Skin)

PEL units: Ethanol: OSHA-PEL 1000 ppm (TWA)

Triethylamine: OSHA-PEL 25 ppm (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): -9 °C (CC) (Triethylamine)

NFPA Rating:

Health: 3

Fire: 3

Reactivity: 0

Extinguisher Media: Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: (Triethylamine) LEL: 1.2% UEL: 8.0%

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: Vapours may travel back to ignition source. Closed Containers exposed to heat may explode.

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

Keep away from oxidizing materials and strong acids. This material should be kept in an area suitable for the storage of flammable liquids. Store away from oxidizing agents, sparks and flame.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: 89.3 °C (Triethylamine)

Vapor Density(Air=1): 3.5 (Triethylamine)

Percent Volatile by Volume: 100%

Solubility in Water: Soluble

Melting Point: (Triethylamine) 115 °C

Vapor Pressure: (Triethylamine) 54 mmHg at 20 °C

Specific Gravity (H2O=1): .73 (Triethylamine)

Evaporation Rate (BuAc=1): >1

Appearance and Odor: Yellowish solution with strong fragrant

odor.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Keep away from ... (incompatible materials to be indicated by the manufacturer).

Incompatibility (Materials to Avoid): Acids, Oxidizers, Halogens, Sodium Hypochlorite, Nitrogen tetraoxide,

Hazardous Decomposition Products: COx, NOx,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Triethylamine) ihl-rat LCLo 1000 ppm/4H; orl-rat LD50 460 mg/kg
(Ethanol) orl-rat LD50 7060 mg/kg; ihl-rat LC50 20000 ppm/10H

Effects of Overexposure:

Acute: See Section 2

Chronic: Mutation data cited. Reproductive data cited. Not listed as a carcinogen by IARC, NTP or OSHA. Tumorigenic data cited.

Conditions Aggravated by Overexposure: Skin disorders, Eye disorders, Liver disorders, Impaired Kidney Function,

Target Organs: Cardiovascular system, Liver, Kidneys,

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

Section 12 - Ecological Data

EPA Waste Numbers: Triethylamine D001, Ethanol D001

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: UN2924, Flammable Liquid, corrosive, n.o.s. (contains Ethyl Alcohol, Triethylamine), 3, II
Label(s) Required: FLAMMABLE LIQUID, CORROSIVE

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Chronic Fire

Name List:

Triethylamine - No

Ethanol - No

Chemical Category:

Triethylamine - No

Ethanol - No

CERCLA Section 103 RQ(lb.): Triethylamine - No

Ethanol - No

RCRA Section 261.33: Triethylamine - No

Ethanol - No

Section 16 - Additional Information

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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 Potassium Iodide Solution

Revised: 11/18/2011
Replaces: 11/16/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Iodine Potassium Iodide

Product Code(s): 86-9051, 86-9053, 86-9055, 20-2220, 20-2340, 20-2341, 20-2500, 20-2501, 74-6410, 95-7860, 74-6410, 20-6078, B5997, B6080, B6085, 20-2335, 20-6000, 20-6070, 20-2275, 10-1026, C70531

Size: 30ml, 100ml, 500ml

Chemical Name: N/A

CAS Number: See Section 3

Formula: See Section 3

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Harmful by inhalation, in contact with skin and if swallowed.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Iodine (CAS#7553-56-2) 1%, Potassium Iodide (CAS# 7681-11-0) 2%, Water (balance)

TLV units: (Iodine) ACGIH-TLV 0.1 ppm (Ceiling)

PEL units: (Iodine) OSHA-PEL 0.1 ppm (Ceiling)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 1

Fire: 0

Reactivity: 0

Extinguisher Media: Use dry chemical, CO2 or appropriate foam.

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: N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place. Keep container dry.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): N/A

Percent Volatile by Volume: 97%

Solubility in Water: Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H2O=1): N/A

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Deep amber liquid with slight

characteristic odor of iodine.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): N/A

Hazardous Decomposition Products: N/A

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Potassium Iodide) orl-mouse LDLo 1862 mg/kg
(Iodine) orl-rat LD50 14 g/kg

Effects of Overexposure:**Acute:** See Section 2**Chronic:** Mutation data cited. Reproductive data cited. Not listed as a carcinogen by IARC, NTP or OSHA.**Conditions Aggravated by Overexposure:** N/A**Target Organs:** N/A**Primary Route(s) of Entry:** N/A

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory**Hazard Category for SARA Section 311/312 Reporting:** Acute**Name List:**Potassium Iodide - No
Iodine - No**Chemical Category:**Potassium Iodide - No
Iodine - No**CERCLA Section 103 RQ(lb.):** Potassium Iodide - No
Iodine - No**RCRA Section 261.33:** Potassium Iodide - No
Iodine - No

Section 16 - Additional Information

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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



Lactose, Monohydrate

Revised: 12/01/2011
Replaces: 10/13/2011
Printed: 12/01/2011

Carolina Biological Supply Company

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CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Lactose

Product Code(s): 17-1025, 87-1750, 87-1752, 25-1012, C61412, C19348

Size: 500 gm, 2.5 kg, 18.75 g, 0.3 gm

Chemical Name: D-(+)-Lactose

CAS Number: 10039-26-6

Formula: C₁₂H₂₂O₁₁ · H₂O

Synonyms: Milk Sugar

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Lactose (CAS#10039-26-6) 100%

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:**Health:** 0**Fire:** 1**Reactivity:** 0**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

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place. Avoid contact with skin and eyes. N/A

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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:** 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.

Section 9 - Physical Data

Molecular Weight: 360.3**Boiling Point:** N/A**Vapor Density(Air=1):** N/A**Percent Volatile by Volume:** N/A**Solubility in Water:** Soluble**Melting Point:** 200°C**Vapor Pressure:** N/A**Specific Gravity (H₂O=1):** N/A**Evaporation Rate (BuAc=1):** N/A**Appearance and Odor:** White to yellowish white crystalline

powder.

Section 10 - Reactivity Data

Stability: Stable**Conditions to Avoid:** N/A**Incompatibility (Materials to Avoid):** N/A**Hazardous Decomposition Products:** CO_x,**Hazardous Polymerization:** Will not occur

Section 11 - Toxicity Data

Toxicity Data: orl-rat LD50 >10 g/kg**Effects of Overexposure:****Acute:** See Section 2**Chronic:** Reproductive data cited. Tumorigenic data cited. Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: Reproductive systems,
Target Organs: Reproductive systems, Blood,
Primary Route(s) of Entry: Ingestion, skin and eye contact.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:
Lactose - No

Chemical Category:
Lactose - No

CERCLA Section 103 RQ(lb.): Lactose - No

RCRA Section 261.33: Lactose - No

Section 16 - Additional Information

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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



METHYLENE BLUE STAINING SOL.

Revised: 10/13/2011
Replaces: 06/24/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Methylene Blue Staining Solution

Product Code(s): 87-5911, 87-5913, 87-5915

Size: 25 mL, 100 mL, 500 mL

Chemical Name: N/A

CAS Number: See Section 3

Formula: See Section 3

Synonyms: N/A

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Methylene Blue (CAS#61-73-4) - 0.23%; Ethyl Alcohol (CAS#64-17-5) - 21.27%; Methyl isobutyl ketone (CAS#108-10-1) - 1.4%; Hexane (CAS#110-54-3) - 0.35%

TLV units: Methylene Blue: No ACGIH-TLV data available

Ethyl alcohol: ACGIH-TLV 1,000 ppm (TWA)

Methyl isobutyl ketone: ACGIH-TLV 50 ppm (TWA); 75 ppm (STEL)

Hexane: ACGIH-TLV- 50 ppm (TWA)

PEL units: Methylene Blue: No OSHA-PEL data available

Ethyl alcohol: OSHA-PEL 1,000 ppm (TWA).

Methyl isobutyl ketone: OSHA-PEL 100 ppm (TWA)

Hexane: OSHA-PEL- 500 ppm (TWA)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): 13.1 °C

NFPA Rating:

Health: 1

Fire: 2

Reactivity: 1

Extinguisher Media: Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: Ethyl alcohol: LEL- 3.3% Ethyl alcohol: UEL- 19%

Autoignition Temperature: 422.8 °C

Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

Bond and ground containers when transferring liquid.

Keep away from oxidizing materials and strong acids.

Wear suitable protective clothing, gloves and eye/face protection. This material should be kept in an area suitable for the storage of flammable liquids. Store away from oxidizing agents, sparks and flame.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): N/A

Percent Volatile by Volume: N/A

Solubility in Water: Soluble

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity (H2O=1): N/A

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Opaque blue liquid; characteristic odor of

ethyl alcohol

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Incompatibility (Materials to Avoid): Oxidizers, Acids, Alkalis, Metal Salts, Halogens, Reducing agents,

Hazardous Decomposition Products: COx,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: Methylene Blue: orl-rat LD50 1180 mg/kg

Ethyl alcohol: orl-rat LD50 7,060 mg/kg; ihl-rat LC50 20,000 ppm/10H

Methyl isobutyl ketone: orl-rat LD50 2,080 mg/kg; ihl-rat LC50 8.2 mg/L/4H

Hexane: orl-rat LD50 28,710 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Mutation data cited. Reproductive data cited. Not listed as a carcinogen by IARC, NTP or OSHA. Tumorigenic data cited.

Conditions Aggravated by Overexposure: N/A

Target Organs: N/A

Primary Route(s) of Entry: N/A

Section 12 - Ecological Data

EPA Waste Numbers: U161

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: UN1993, Description: Flammable Liquid, n.o.s. (Ethyl alcohol, Methyl isobutyl ketone), 3, II

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Fire

Name List:

Methylene Blue - No

Ethyl alcohol - No

Methyl isobutyl ketone - Yes

Hexane - No

Chemical Category:

Methylene Blue - No

Ethyl alcohol - No

Methyl isobutyl ketone - No

Hexane - No

CERCLA Section 103 RQ(lb.): Methylene Blue - No

Ethyl alcohol - No

Methyl isobutyl ketone - 5000

Hexane - No

RCRA Section 261.33: Methylene Blue - No

Ethyl alcohol - No

Methyl isobutyl ketone - Yes

Hexane - No

Section 16 - Additional Information

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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



Phenol Red, 0.04%

Revised: 03/07/2011
Replaces: 07/13/2010
Printed: 02/10/2012

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Phenol Red, 0.04%

Product Code(s): 87-9873, 87-9875, C70596, C93538, C90221, C19251

Size: Various

Chemical Name: Phenolsulfonphthalein, 0.04% Aqueous Solution

CAS Number: see section 3

Formula: C₁₉H₁₄O₅S

Synonyms: Phenol Red, Phenolsulfonphthalein, PSP

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Harmful in contact with skin and if swallowed.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Phenol Red (CAS # 143-74-8) 0.04%, Sodium Hydroxide (CAS# 1310-73-2), Water (balance)

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, wash immediately with plenty of water.

Ingestion - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 1

Fire: 0

Reactivity: 0

Extinguisher Media: Use dry chemical, CO2 or appropriate foam.

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: N/A

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

Avoid contact with skin and eyes.

Avoid contact with clothing. Store at controlled room temperature.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: 376.36

Boiling Point: approx. 100°C

Vapor Density(Air=1): N/A

Percent Volatile by Volume: 0%

Solubility in Water: Soluble

Melting Point: approx. 0°C

Vapor Pressure: N/A

Specific Gravity (H2O=1): 1.01

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: Red solution; odorless.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Acids,

Hazardous Decomposition Products: Acidic Vapors, SOx, COx,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: N/A

Effects of Overexposure:

Acute: See Section 2

Chronic: N/A

Conditions Aggravated by Overexposure: N/A

Target Organs: N/A

Primary Route(s) of Entry: Inhalation and ingestion.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Name List:

Phenol Red - No

Sodium Hydroxide - No

Chemical Category:

Phenol Red - No

Sodium Hydroxide - No

CERCLA Section 103 RQ(lb.): Phenol Red - No

Sodium Hydroxide - 1000 lbs

RCRA Section 261.33: Phenol Red - No

Sodium Hydroxide - No

Section 16 - Additional Information

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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



Starch

Revised: 12/01/2011
Replaces: 10/13/2011
Printed: 12/01/2011

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Starch

Product Code(s): 89-2530, 89-2532, 89-2534, 89-2550, 89-2560, 89-2501, 89-2503, 97-2114, 97-2901, 97-2928, 97-2101, 89-2529, C11018, C70274

Size: Various

Chemical Name: Carbohydrate (Starch)

CAS Number: 9005-25-8

Formula: See Section 3

Synonyms: Soluble Starch, Corn Starch

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

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

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.

Potential Health Effects:

Eyes: May cause irritation.

Skin: Non-Hazardous under normal use.

Ingestion: Not expected to be harmful by ingestion.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Starch (CAS# 9005-25-8) 100%; To the best of our knowledge, this product is non-hazardous and is not subject to the requirements of 29 CFR 1910.1200.

TLV units: ACGIH-TLV 10 mg/m³

PEL units: OSHA-PEL 15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Ingestion - If swallowed, rinse mouth with water (only if the person is conscious).

Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A

NFPA Rating:

Health: 0

Fire: 1

Reactivity: 0

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: Avoid Dusting. May become explosive when dispersed in air. Fire or excessive heat may produce hazardous decomposition products.

Section 6 - Spill or Leak Procedures

Steps to Take 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.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

Keep away from sources of ignition - No smoking.

Harmful by inhalation and if swallowed.

Avoid contact with skin and eyes.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. 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: 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.

Section 9 - Physical Data

Molecular Weight: N/A

Boiling Point: N/A

Vapor Density(Air=1): N/A

Percent Volatile by Volume: N/A

Solubility in Water: Soluble

Melting Point: Decomposes

Vapor Pressure: N/A

Specific Gravity (H₂O=1): N/A

Evaporation Rate (BuAc=1): N/A

Appearance and Odor: White, odorless crystals.

Section 10 - Reactivity Data

Stability: Stable

Conditions to Avoid: Avoid dusting.

Incompatibility (Materials to Avoid): Oxidizers,

Hazardous Decomposition Products: CO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: ipr-mus LD50 6600 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: N/A

Target Organs: Respiratory system, Skin, Eyes, Gastrointestinal tract,

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

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 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.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: N/A

Name List:

Starch - No

Chemical Category:

Starch - No

CERCLA Section 103 RQ(lb.): Starch - No

RCRA Section 261.33: Starch - No

Section 16 - Additional Information

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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