

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: CH₃CHOOCH₃
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

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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

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Percent Volatile by Volume: 99%
Evaporation Rate(H2O=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

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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 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.

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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

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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

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IODINE TINCTURE
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00
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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

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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

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: CH₃COOH
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

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VINEGAR
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00
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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

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CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00
Replaces: None
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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

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