

# Safety Data Sheet

## Chromatography Solvent (Ethanol/Acetone)

**CAROLINA**<sup>®</sup>  
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### Section 1 Product Description

**Product Name:** Chromatography Solvent (Ethanol/Acetone)  
**Recommended Use:** Science education applications  
**Synonyms:** Ethanol Acetone Solution  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Highly flammable liquid and vapor. Toxic in contact with skin. Causes serious eye irritation. Causes damage to organs. Harmful to aquatic life.

**GHS Classification:**

Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 1, Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2, Acute Toxicity - Dermal Category 3, Hazardous to the aquatic environment - Acute Category 3

**Other Safety Precautions:** IF exposed: Call a POISON CENTER or doctor/physician.

**Acute Toxicity Oral Contains** 77.3775 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Dermal Contains** 87.3775 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Vapor Contains** 87.3775 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Dust/Mist Contains** 87.3775 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Ethanol	64-17-5	77.38
Acetone	67-64-1	10
Water	7732-18-5	4.5
2-Propanol	67-63-0	4.28
Methanol	67-56-1	3.85

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF ON SKIN: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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<b>Extinguishing Media:</b>	Use dry chemical, CO2 or appropriate foam.
<b>Fire Fighting Methods and Protection:</b>	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
<b>Fire and/or Explosion Hazards:</b>	N/A Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
<b>Hazardous Combustion Products:</b>	Carbon dioxide, Carbon monoxide

## Section 6 Spill or Leak Procedures

<b>Steps to Take in Case Material Is Released or Spilled:</b>	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.
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## Section 7 Handling and Storage

<b>Handling:</b>	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/.../ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe gas/fumes/vapor/spray.
<b>Storage:</b>	Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed in a cool, well-ventilated place.
<b>Storage Code:</b>	Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

## Section 8 Protection Information

<b>Chemical Name</b>	<b>ACGIH</b>		<b>OSHA PEL</b>	
	<b>(TWA)</b>	<b>(STEL)</b>	<b>(TWA)</b>	<b>(STEL)</b>
Ethanol	N/A	1000 ppm STEL	1000 ppm TWA; 1900 mg/m3 TWA	N/A
Acetone	500 ppm TWA	750 ppm STEL	1000 ppm TWA; 2400 mg/m3 TWA	N/A
2-Propanol	200 ppm TWA	400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA	N/A
Methanol	200 ppm TWA	250 ppm STEL	200 ppm TWA; 260 mg/m3 TWA	N/A

<b>Control Parameters</b>	
<b>Engineering Measures:</b>	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
<b>Personal Protective Equipment (PPE):</b>	Lab coat, apron, eye wash, safety shower.
<b>Respiratory Protection:</b>	No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required. Wear a NIOSH approved respirator if any exposure is possible.
<b>Respirator Type(s):</b>	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.
<b>Eye Protection:</b>	Wear chemical splash goggles when handling this product. Have an eye wash station available.
<b>Skin Protection:</b>	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

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Gloves:

Nitrile

## Section 9 Physical Data

**Formula:** See Section 3  
**Molecular Weight:** N/A  
**Appearance:** Colorless Liquid  
**Odor:** Moderate Alcohol Odor  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** -114 C  
**Boiling Point:** 56 C  
**Flash Point:** -20 C  
**Flammable Limits in Air:** (Ethanol) LEL 3.3% UEL 19.0%

**Vapor Pressure:** N/A  
**Evaporation Rate (BuAc=1):** N/A  
**Vapor Density (Air=1):** 1.6 (Ethanol)  
**Specific Gravity:** 0.79 (Ethanol)  
**Solubility in Water:** Soluble  
**Log Pow (calculated):** -0.32  
**Autoignition Temperature:** No data available  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 100%

## Section 10 Reactivity Data

**Reactivity:** No data available  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.  
**Incompatible Materials:** Organic Peroxides, Strong acids, Oxidizing materials, Caustics (bases), Peroxides, Halogens, Water-reactive materials  
**Hazardous Decomposition Products:** Carbon dioxide  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** N/A  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Acetone	67-64-1	Oral LD50 Mouse 3000 mg/kg	Dermal LD50 Rabbit 20000 mg/kg	Inhalation LC50 (8h) Rat 50.1 MG/L
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
2-Propanol	67-63-0	Oral LD50 Rat 5045 mg/kg Oral LD50 Mouse 3600 mg/kg		INHALATION LC50 Rat 16000 ppm
Methanol	67-56-1	Oral LD50 Mouse 7300 mg/kg		INHALATION LC50 Rat 64000 ppm

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Ethanol	64-17-5	Listed	Listed	Listed
Acetone	67-64-1	Not listed	Not listed	Not listed
2-Propanol	67-63-0	Listed	Not listed	Not listed
Methanol	67-56-1	Not listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.

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## Target Organ Effects:

**Acute:**

See Section 2

**Chronic:**

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

## Section 12

## Ecological Data

**Overview:** Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife.

**Mobility:** This material is expected to have very high mobility in soil. It does not absorb to most soil types.

**Persistence:** Biodegradation

**Bioaccumulation:** Bioconcentration is not expected to occur.

**Degradability:** Biodegrades quickly.

**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Ethanol	64-17-5	96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 2 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA 10800 MG/L 48 HR LC50 DAPHNIA MAGNA 9268 - 14221 MG/L
Acetone	67-64-1	96 HR LC50 LEPOMIS MACROCHIRUS 8300 MG/L 96 HR LC50 ONCORHYNCHUS MYKISS 4.74 - 6.33 ml/l 48 HR EC50 DAPHNIA MAGNA 12600 - 12700 MG/L
Water	7732-18-5	No data available
2-Propanol	67-63-0	96 HR LC50 LEPOMIS MACROCHIRUS > 1400000 µG/L 96 HR LC50 PIMEPHALES PROMELAS 11130 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 13299 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L
Methanol	67-56-1	96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC]

## Section 13

## Disposal Information

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

**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

### Ground - DOT Proper Shipping Name:

UN1993, Flammable Liquids, N.O.S. (Ethanol, Acetone), 3, II; 30 mL can be handled as an excepted quantity

### Air - IATA Proper Shipping Name:

Not regulated for air transport by IATA.

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ethanol	64-17-5	No	No	No	No	No
Acetone	67-64-1	No	No	5000 lb final RQ; 2270 kg final RQ	No	No
2-Propanol	67-63-0	No	No	No	No	No
Methanol	67-56-1	No	No	No	No	No

### California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

## Section 16

## Additional Information

# Safety Data Sheet

Revised: 09/09/2015

Replaces: 09/03/2014

Printed: 10-29-2015

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.

## Glossary

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