

# Safety Data Sheet

## Universal Indicator

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Universal Indicator  
**Recommended Use:** Science education applications  
**Synonyms:** Universal pH Indicator  
**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. Causes damage to organs.

**GHS Classification:**

Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 2

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

**Acute Toxicity Oral Contains** 65.491 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Dermal Contains** 65.491 % 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	65.34
Water	7732-18-5	27.65
2-Propanol	67-63-0	3.61
Methanol	67-56-1	3.25
Bromothymol Blue, Sodium Salt	34722-90-2	0.06
Phenolphthalein	77-09-8	0.06
Methyl Red	845-10-3	0.03
Thymol Blue, Sodium Salt	62825-21-2	0.01

### 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:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

### Section 5 Firefighting Procedures

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<b>Extinguishing Media:</b>	Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.
<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>	Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
<b>Hazardous Combustion Products:</b>	Sodium Oxides, Carbon oxides, Nitrogen oxides

## Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** 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. Isolate area. Keep unnecessary personnel away. Evaporation of volatile substances can lead to the displacement of air creating an environment that can cause asphyxiation. Evacuate the area promptly.

Use water spray to dilute spill to a nonflammable mixture Ensure clean-up measures are in compliance with OSHA (29 CFR 1910.120). Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Contain the discharged material. Do not allow the spilled product to enter public drainage system or open waterways.

## Section 7 Handling and Storage

**Handling:** 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 not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous; use caution.

**Storage:** 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.

**Storage Code:** Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

## Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>
	(TWA)                      (STEL)	(TWA)                      (STEL)
Ethanol	N/A                      1000 ppm STEL	1000 ppm TWA; 1900 mg/m3 TWA
2-Propanol	200 ppm TWA                      400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA
Methanol	200 ppm TWA                      250 ppm STEL	200 ppm TWA; 260 mg/m3 TWA
Bromothymol Blue, Sodium Salt	N/A                      N/A	N/A                      N/A
Phenolphthalein	N/A                      N/A	N/A                      N/A
Methyl Red, Sodium Salt	N/A                      N/A	N/A                      N/A

### Control Parameters

**Engineering Measures:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use.

**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** 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.

**Gloves:** Nitrile

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## Section 9

## Physical Data

<p><b>Formula:</b> N/A  <b>Molecular Weight:</b> N/A  <b>Appearance:</b> Olive-green Colorless  <b>Odor:</b> Moderate Alcohol Odor  <b>Odor Threshold:</b> No data available  <b>pH:</b> No data available  <b>Melting Point:</b> -114 C  <b>Boiling Point:</b> 79 C  <b>Flash Point:</b> 17 C  <b>Flammable Limits in Air:</b> 3.3% 19.0%</p>	<p><b>Vapor Pressure:</b> 44.6 mm Hg at 20 °C  <b>Evaporation Rate (BuAc=1):</b> 4.1  <b>Vapor Density (Air=1):</b> 1.59  <b>Specific Gravity:</b> 0.794 at 15.56 °C  <b>Solubility in Water:</b> Soluble  <b>Log Pow (calculated):</b> No data available  <b>Autoignition Temperature:</b> No data available  <b>Decomposition Temperature:</b> No data available  <b>Viscosity:</b> No data available  <b>Percent Volatile by Volume:</b> 100%</p>
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## Section 10

## Reactivity Data

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.
<b>Incompatible Materials:</b>	Organic Peroxides, Strong acids, Oxidizing materials, Water-reactive materials, acid chlorides, , acid anhydrides, , Alkali and Alkaline Metals, Potassium t-Butoxide,, Silver Nitrate, Ammonia
<b>Hazardous Decomposition Products:</b>	Nitrogen oxides, Carbon oxides, Sodium Oxides
<b>Hazardous Polymerization:</b>	Will not occur

## Section 11

## Toxicity Data

<b>Routes of Entry</b>	Inhalation, ingestion, eye or skin contact.
<b>Symptoms (Acute):</b>	N/A
<b>Delayed Effects:</b>	No data available

Acute Toxicity:	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Chemical Name				
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
Bromothymol Blue, Sodium Salt	34722-90-2			
Phenolphthalein	77-09-8			
Methyl Red, Sodium Salt	845-10-3			

Carcinogenicity:	CAS Number	IARC	NTP	OSHA
Chemical Name				
Ethanol	64-17-5	Listed	Listed	Listed
2-Propanol	67-63-0	Listed	Not listed	Not listed
Methanol	67-56-1	Not listed	Not listed	Not listed
Bromothymol Blue, Sodium Salt	34722-90-2	Not listed	Not listed	Not listed
Phenolphthalein	77-09-8	Listed	Listed	Listed
Methyl Red, Sodium Salt	845-10-3	Not listed	Not listed	Not listed

<b>Chronic Effects:</b>	
<b>Mutagenicity:</b>	No evidence of a mutagenic effect.
<b>Teratogenicity:</b>	No evidence of a teratogenic effect (birth defect).
<b>Sensitization:</b>	No evidence of a sensitization effect.
<b>Reproductive:</b>	No evidence of negative reproductive effects.
<b>Target Organ Effects:</b>	
<b>Acute:</b>	See Section 2

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**Chronic:**

To the best of our knowledge, the toxicological properties of this mixture have not been thoroughly evaluated.

## Section 12

## Ecological Data

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

**Mobility:** No data

**Persistence:** Biodegradation, Adsorbs to soil/solids, Dissolved into water, Photodegradation

**Bioaccumulation:** No data

**Degradability:** No data

**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
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]
Bromothymol Blue, Sodium Salt	34722-90-2	No data available
Phenolphthalein	77-09-8	
Methyl Red, Sodium Salt	845-10-3	

## 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:**  
UN1170, Ethanol Solution, II, 3

**Air - IATA Proper Shipping Name:**  
UN1170, Ethanol Solution, II, 3

## 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
2-Propanol	67-63-0	Isopropyl alcohol	No	No	No	No
Methanol	67-56-1	No	No	No	No	No
Bromothymol Blue, Sodium Salt	34722-90-2	No	No	No	No	No
Phenolphthalein	77-09-8	Phenolphthalein	No	No	No	No
Methyl Red, Sodium Salt	845-10-3	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

Revised: 10/13/2015

Replaces: 09/09/2015

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# Safety Data Sheet

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