

# Safety Data Sheet

## Bogen Universal Indicator Solution

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

**Product Name:** Bogen Universal Indicator Solution  
**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**



Flammable liquid and vapor. Causes damage to organs.

**GHS Classification:**

Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 1, Flammable Liquid Category 3

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

**Acute Toxicity Oral Contains** 43.1275 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Dermal Contains** 43.1275 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Vapor Contains** 43.1275 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Dust/Mist Contains** 43.1275 % 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>
Water	7732-18-5	52.4 52.36
Ethanol	64-17-5	42.99
2-Propanol	67-63-0	2.4 2.38
Methanol	67-56-1	2.14 2.1
Bromothymol Blue, Sodium Salt	34722-90-2	0.06
Phenolphthalein	77-09-8	0.06
Methyl Red	845-10-3	0.02

### 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.

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## Section 5

## Firefighting Procedures

<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>	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. Ventilate the contaminated area. Evaporation of volatile substances can lead to the displacement of air creating an environment that can cause asphyxiation. Isolate area. Keep unnecessary personnel away. 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.
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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 not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Storage:</b>	Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Suitable for any general chemical storage.
<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
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
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

<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.
<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.
<b>Gloves:</b>	Nitrile

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## Section 9

## Physical Data

**Formula:** See Section 3  
**Molecular Weight:** No data available  
**Appearance:** Colorless Dark Red Liquid  
**Odor:** Moderate Alcohol Odor  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** Estimated -32 C -114 C  
**Boiling Point:** Estimated 81 C 79 C  
**Flash Point:** Estimated 24 C  
**Flammable Limits in Air:** Ethanol: 3.3 - 19%

**Vapor Pressure:** No data available  
**Evaporation Rate (BuAc=1):** No data available  
**Vapor Density (Air=1):** No data available  
**Specific Gravity:** < 1  
**Solubility in Water:** Soluble  
**Log Pow (calculated):** No data available  
**Autoignition Temperature:** No data available  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 47.5%

## Section 10

## Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.  
**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:** Water-reactive materials, Organic Peroxides, Strong acids, Oxidizing materials  
**Hazardous Polymerization:** Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation and skin contact.  
**Symptoms (Acute):** Respiratory Irritation, Dermatitis, Central Nervous System Depression, Dizziness, Eye disorders  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
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:

Chemical Name	CAS Number	IARC	NTP	OSHA
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

### 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.  
**Target Organ Effects:**  
**Acute:** Central Nervous System, Eyes  
**Chronic:** Eyes

## Section 12

## Ecological Data

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**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** This material is expected to have high mobility in soil. It absorbs weakly to most soil types.  
**Persistence:** Biodegradation, Evaporation into atmosphere  
**Bioaccumulation:** Bioconcentration is not expected to occur.  
**Degradability:** Biodegrades at a moderate rate.  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
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
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 96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC]
Methanol	67-56-1	No data available
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):** If discarded, this product is considered a RCRA ignitable waste, D001.

## Section 14 Transport Information

<b>Ground - DOT Proper Shipping Name:</b> UN 1170 ETHANOL SOLUTIONS Class 3 P.G. II	<b>Air - IATA Proper Shipping Name:</b> UN 1170 ETHANOL SOLUTIONS Class 3 P.G. II
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## 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	No	No	No	No	No
Methanol	67-56-1	Methanol	No	5000 lb final RQ; 2270 kg final RQ	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.

# Safety Data Sheet

## Section 16

## Additional Information

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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