

Bromocresol Green Solution, 0.04%, alcoholic**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Bromocresol Green Solution, 0.04%, alcoholic

Synonyms/Generic Names: None

SDS Number: 110.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Flammable liquid, Target organ effect, Irritant

Target Organs: Nerves, Liver, Heart

Signal Words: Danger

Pictograms



GHS Classification:

Flammable liquids	Category 2
Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity-single exposure	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H225	Highly flammable liquid and vapor.
H315+H320	Causes skin and eye irritation.
H401	Toxic to aquatic life.

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/face protection/eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed

NFPA Ratings

Health	1
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0
Personal	H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ethyl Alcohol	95	64-17-5	200-578-6	C ₂ H ₅ OH	46.07 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol
Bromocresol Green, Sodium Salt	<1	62625-32-5	263657-4	C ₂₁ H ₁₃ Br ₄ NaO ₅ S	720.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Flammable liquid. Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Material can react violently with water (spattering and misting) and react with metals to produce flammable hydrogen gas.
Specific hazards arising from	Emits toxic fumes under fire conditions. (Carbon oxides) (See also

the chemical	Stability and Reactivity section) Vapors can travel to a source of ignition and flash back. Containers may explode in a fire. Cool containers from a distance using water spray. SENSITIVE TO STATIC DISCHARGE.
---------------------	---

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with vermiculite or other noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Use with adequate ventilation and grounding. Wash thoroughly after using. Keep container closed when not in use. Keep away from sources of ignition. No smoking. Take measure to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Store in tightly closed, original containers in a cool, dry, well ventilated area. Store between 55-100°F for product stability. Do not store with strong oxidizing agents, strong acids, peroxides, aldehydes, halogens, ammonia, acid anhydrides or alkali metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Ethyl Alcohol	1000 ppm 1900 mg/m ³	REL	NIOSH
	1000 ppm 1900 mg/m ³	PEL	OSHA
	1000 ppm 1880 mg/m ³	STEL	ACGIH
	3300 ppm	IDLH	OSHA

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles with face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, complete body suit.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, green liquid
Odor	Mild alcohol
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-144°C (-227.2°F) (ethyl alcohol)
Initial boiling point and boiling range	78°C (172.4°F) to 80°C (174°F) (ethyl alcohol)
Flash point	14°C (57.2°F) (ethyl alcohol)
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	3.3-19%(ethyl alcohol)
Vapor pressure	(@ 20°C) 44.6 mmHg (ethyl alcohol)
Vapor density	(air=1) 1.6 (ethyl alcohol)
Relative density	Not Available
Solubility (ies)	Completely soluble in water (ethyl alcohol)
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	363°C (685.4°F) (ethyl alcohol)
Decomposition temperature	Mild alcohol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Keep away from heat, flame and sparks.
Incompatible Materials	Alkali metals, ammonia, oxidizing agents, peroxides.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ethyl Alcohol

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 10 h – 20000 ppm
Ingestion	LD50 Oral – rat – 7,060 mg/kg Remarks: Lungs, Thorax, or Respiration: Other changes.

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans (Ethyl Alcohol).

NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Insensitivity to pain, feel of coolness or cold, skin looks white and feels hard and cold.
Eyes	Stinging pain, watering of eyes, inflammation of eyelids and conjunctivitis.
Respiratory	Rapid irregular breathing, headache, fatigue, mental confusion, nausea and vomiting, giddiness and poor judgment, convulsions and death.
Ingestion	Breath has sweet, organic odor, mental confusion, drowsiness, nausea, vomiting and headache.

Chronic Toxicity	Ingestion may cause blindness. Repeated/prolonged skin contact may cause dryness or rashes.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Pre-and Post-implant mortality.
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ethyl Alcohol

Aquatic Vertebrate	LC ₅₀ (96 hours): 13,000 mg/L <i>Oncorhynchus mykiss</i> (Rainbow Trout)
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Will not accumulate
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1993, Flammable liquids, n.o.s., (ethanol), 3, pg II
TDG	UN1993, FLAMMABLE LIQUIDS, N.O.S., (ETHANOL), 3, PG II
IMDG	UN1993, FLAMMABLE LIQUIDS, N.O.S., (ETHANOL), 3, PG II
Marine Pollutant	No
IATA/ICAO	UN1993, Flammable liquids, n.o.s., (ethanol), 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Ethyl Alcohol (in alcoholic beverages)
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Ethyl Alcohol
SARA 312	Ethyl Alcohol
SARA 313	Listed: Ethyl Alcohol
WHMIS Canada	Class B-2: Flammable and combustible liquid- Flammable liquid Class D-2B: Poisonous and infectious material- Other effects- Toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	01/09/2013
Revision 2	06/21/2013

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.