

**Section 1 Chemical Product and Company Identification**

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**HOME SCIENCE TOOLS**

665 Carbon Street  
Billings, MT 59102  
800-860-6272  
www.homesciencetools.com

**CHEMTREC 24 Hour Emergency USA**  
**Phone Number (800) 424-9300**  
**1 703-741-5500 (from anywhere in the world).**  
For laboratory and industrial use only.  
Not for drug, food or household use.

<b>Product</b>	<b>BROMOTHYMOL BLUE, 0.04% AQUEOUS SOLUTION</b>
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<b>Synonyms</b>	Bromothymol Blue, Water Solution
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**Section 2 Hazards Identification**

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified  
**Pictograms:** Not classified  
**Target organs:** None known

**GHS Classification:** Not classified  
**GHS Label information: Hazard statement:** Not classified  
**Precautionary statement:** Not classified

**Supplementary information:**

Do not breathe vapors, spray or mist. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known  
Physical hazards not otherwise classified (PHNOC) - Not Known

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	99.96%	231-791-2
Bromothymol blue, sodium salt	34722-90-2	0.04%	252-169-7

**Section 4 First Aid Measures**

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances. Protect from light.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Bromothymol blue	None established	None established	None established

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Liquid, clear, blue-green. <b>Odor:</b> No odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> Data not available. <b>Melting / Freezing point:</b> Approximately 0°C (32°F) (water) <b>Boiling point:</b> Approximately 100°C (212°F) (water) <b>Flash point:</b> Data not available	<b>Evaporation rate ( Water = 1):</b> <1 <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> 14 (water) <b>Vapor density (Air = 1):</b> 0.7 (water) <b>Relative density (Specific gravity):</b> Approximately 1.0 (water) <b>Solubility(ies):</b> Complete in water.	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available <b>Decomposition temperature:</b> Data not available. <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> Mixture <b>Molecular weight:</b> Mixture
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## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures which cause evaporation. Protect from light.

**Incompatible materials:** Strong oxidizers.

**Hazardous decomposition products:** Carbon oxides, sulfur oxides and bromine gas.

## Section 11 Toxicological Information

**Acute toxicity:** Data not available

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Skin: May cause irritation.

Eyes: May cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information: RTECS #:** Data not available

## Section 12 Ecological Information

**Toxicity to fish:** No data available

**Toxicity to daphnia and other aquatic invertebrates:** No data available

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2016 ERG Guide #:** Not applicable

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Bromothymol blue, sodium salt	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

## Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**KARLIN FOODS**  
CORP  
*Always Something Cooking.*

## SAFETY DATA SHEET

<b>Section 1, Identification</b>	
<i>Product:</i>	Karlin Foods Baking Soda, KF ID# S24BS
<i>Manufacturer:</i>	Karlin Foods Corp 1845 Oak St. Suite 19 Northfield, IL 60093
<i>Emergency Phone Number:</i>	Karlin Foods: 847-441-8330 Chemtrec: 800-424-9300
<i>Recommended Use:</i>	Leavening agent, cleaner ingredient, bath salt ingredient, water softener, diaper rinse ingredient, direct food additive
<i>Restrictions on Use:</i>	None
<b>Section 2, Hazard(s) Identification</b>	
<i>Classification:</i>	OSHA Regulatory Status. This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
<i>Required Label:</i>	The product contains no substances which at their given concentration, are considered to be hazardous to health
<i>Other Information:</i>	Product dust may cause mechanical eye irritation.
<b>Section 3, Composition/Information on Ingredients</b>	
<i>Formula:</i>	NaHCO <sub>3</sub>
<i>Chemical Name:</i>	Sodium Bicarbonate
<b>Section 4, First Aid Measures</b>	
<i>Eye Contact:</i>	Flush eyes with water as a precaution. Get Medical attention if irritation develops and persists.
<i>Skin Contact:</i>	Wash skin with soap and water. Get medical attention if irritation develops and persists.
<i>Inhalation:</i>	Remove person to fresh air. If signs/symptoms continue, get medical attention.
<i>Ingestions:</i>	Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur
<i>Most important symptoms and effects, both acute and delayed:</i>	None known.
<i>Indication of immediate medical attention and special treatment needed, if necessary</i>	Treat symptomatically.
<b>Section 5, Fire-Fighting Measures</b>	
<i>Suitable Extinguishing Media:</i>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
<i>Specific Hazards Arising from the Chemical:</i>	None in particular. Not flammable
<i>Hazardous Combustion Products:</i>	None
<i>Explosion data</i>	

<i>Sensitivity to Mechanical Impact:</i>	Not sensitive
<i>Sensitivity to Static Discharge:</i>	Not sensitive
<i>Protective equipment and precautions for firefighters</i>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
<b>Section 6, Accidental Release Measures</b>	
<i>Personal Precautions:</i>	Avoid dust formation.
<i>Other:</i>	For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<i>Environmental Precautions:</i>	Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information.
<i>Methods for Containment:</i>	Vacuum or shovel waste into a drum and label contents for disposal.
<i>Methods for cleaning up:</i>	Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. Dispose of waste as indications in Section 13.
<b>Section 7, Handling and Storage</b>	
<i>Handling:</i>	Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected.
<i>Storage:</i>	Keep in a dry place. Keep away from incompatible products (acids). Do not store with strong smelling materials.
<i>Incompatible Products:</i>	Except under controlled conditions: Acids
<b>Sections 8, Exposure Controls/Personal Protection</b>	
<i>Control Parameters:</i>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Local nuisance dust standards apply.
<i>Appropriate Engineering Controls:</i>	Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
<i>Individual protection measures, such as personal protective equipment.</i>	
<i>Eye/Face Protection:</i>	Safety glasses with side shields
<i>Skin and Body Protection:</i>	Wear suitable protective clothing. Protective shoes or boots.
<i>Hand Protection:</i>	Protective gloves.
<i>Respiratory Protection:</i>	In case of inadequate ventilation, wear respiratory protection.
<i>Hygiene Measures:</i>	Handle in accordance with good industrial hygiene and safety practice.

<i>General Information:</i>	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.
<b>Section 9, Physical and Chemical Properties</b>	
<i>Appearance:</i>	Crystalline, Powder
<i>Physical State:</i>	Solid
<i>Color:</i>	White
<i>Odor:</i>	Odorless
<i>Odor Threshold:</i>	Not applicable
<i>pH:</i>	8.3 (1% solution) @ 25 degrees Celsius
<i>Melting Point/freezing point:</i>	Not applicable
<i>Boiling Point/Range:</i>	No information available
<i>Flash point:</i>	Not applicable
<i>Evaporation Rate:</i>	No information available
<i>Flammability (solid, gas):</i>	No information available
<i>Flammability Limit in Air:</i>	No information available
<i>Vapor pressure:</i>	Negligible
<i>Vapor density:</i>	No information available
<i>Density:</i>	No information available
<i>Specific gravity:</i>	2.22
<i>Water solubility:</i>	96g/L @ 20 degrees Celsius
<i>Solubility in other solvents:</i>	No information available
<i>Partition coefficient:</i>	Not applicable
<i>Autoignition temperature:</i>	No information available
<i>Decomposition temperature:</i>	No information available
<i>Viscosity, kinematic:</i>	No information available
<i>Viscosity, dynamic:</i>	No information available
<i>Explosive properties:</i>	No information available
<i>Oxidizing properties:</i>	Non-oxidizing
<i>Molecular weight:</i>	84.01
<i>Bulk Density:</i>	66 lb/cu ft
<b>Section 10, Stability and Reactivity</b>	
<i>Reactivity:</i>	None under normal use conditions
<i>Chemical Stability:</i>	Stable
<i>Possibility of Hazardous Reactions:</i>	None under normal processing/
<i>Hazardous polymerization:</i>	Hazardous polymerization does not occur
<i>Conditions to avoid:</i>	Heat. Humid air. Avoid contact with acids except under controlled conditions. Keep away from strong odor.
<i>Incompatible materials:</i>	Except under controlled conditions: Acids.
<i>Hazardous Decomposition Products:</i>	Reacts with acids to release carbon dioxide gas and heat.
<b>Section 11, Toxicological Information</b>	
<i>LD50 Oral:</i>	>5,000 mg/kg (rat)
<i>LD50 Dermal:</i>	No information available
<i>LC50 Inhalation:</i>	>4.74 mg/L (rat) 4.5 hr
<i>Eye Contact:</i>	Non-irritating

<i>Skin Contact:</i>	Non-irritating			
<i>Sensitization:</i>	Non-sensitizing			
<i>Info on toxicological effects: Symptoms</i>	No information available.			
<i>Chronic Toxicity:</i>	No known effect			
<i>Mutagenicity:</i>	Not mutagenic			
<i>Carcinogenicity:</i>	Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH)			
<i>Reproductive toxicity:</i>	No information available			
<i>STOT – single exposure:</i>	No information available			
<i>STOT – repeated exposure:</i>	No information available			
<i>Aspiration hazard:</i>	No information available			
<b>Section 12, Ecological Information</b>				
<b><u>Ecotoxicity</u></b>				
<b>Sodium Bicarbonate (144-55-8)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Sodium bicarbonate	96 hr.	<i>Lepomis macrochirus</i> (Bluefill sunfish)	NOEC: 5,200 LC50: 7,100	mg/L
Sodium bicarbonate	48 hr. immobilization test	<i>Daphnia magna</i>	NOEC: 3,100 EC50: 4,100	mg/L
Sodium bicarbonate	96 hr.	<i>Oncorhynchus mykiss</i> (rainbow trout)	NOEC: 2,300 LC50: 7,700	mg/L
<i>Persistence and degradability:</i>	Biodegradability does not pertain to inorganic substances.			
<i>Bioaccumulation:</i>	Does not bio-accumulate			
<i>Mobility:</i>	Dissociates into ions.			
<i>Other Adverse Effects:</i>	None known.			
<b>Section 13, Disposal Considerations</b>				
<i>Waste disposal methods:</i>	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.			
<i>Contaminated Packaging:</i>	Dispose of in accordance with local regulations			
<b>Section 14, Transport Information</b>				
<i>DOT</i>	Not Regulated			
<b>Section 15, Regulatory Information</b>				
<i>U.S. Federal Regulations</i>				
<i>SARA313</i>	Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372			
<i>SARA 311/312 Hazard Categories</i>				
<i>Acute health hazard</i>	No			
<i>Chronic health hazard</i>	No			
<i>Fire hazard</i>	No			
<i>Sudden release of pressure hazard</i>	No			
<i>Reactive Hazard</i>	No			

<i>Clean Water Act</i>	This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)
<i>CERCLA</i>	This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.
<i>California Proposition 65</i>	This product does not contain any Proposition 65 Chemicals
<i>U.S. State Right-to-Know Regulations</i>	This product does not contain any substances regulated by state right-to-know regulations.

<i>International Inventories</i>								
Component	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sodium Bicarbonate 144-55-8 ( 100 )	X	X	X	X	X	X	X	X

**Section 16, Other Information**

<b>NFPA</b>	<b>Health Hazards</b> 0	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special Hazards</b> -
<b>HMIS</b>	<b>Health Hazards</b> 0	<b>Flammability</b> 0	<b>Physical hazard</b> 0	<b>Personal Protection</b> X

**NFPA/HMIS Ratings Legend**      Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

**Product Certifications**  
This product meets the chemical testing specifications defined in the USP and Food Chemicals Codex (FCC), 9th Edition and is manufactured under GMP and in compliance with FSMA. The MUL (maximum use level) for sodium bicarbonate is 100 mg/L under NSF/ANSI Standard 60.

**Section 1 Identification**

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Billings, MT 59102  
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**CHEMTREC 24 Hour Emergency  
Phone Number (800) 424-9300**  
For laboratory and industrial use only.  
Not for drug, food or household use.

**Product** | **CALCIUM CHLORIDE, DIHYDRATE****Synonyms** | Calcium Chloride, Hydrated**Section 2 Hazards identification****Signal word:** WARNING**Pictograms:** GHS07**Target organs:** None known**GHS Classification:**

Acute toxicity (Oral) (Category 4)

Eye irritation (Category 2B)

Skin irritation (Category 2)

**GHS Label information: Hazard statement:**

H302: Harmful if swallowed.

H315: Causes skin irritation.

H320: Causes eye irritation.

**Precautionary statement:**

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330: Rinse mouth.

P332+P313: If skin irritation occurs: Get medical attention.

P337+P313: If eye irritation persists: Get medical attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

**Section 3 Composition / information on ingredients**

Chemical Name	CAS #	%	EINECS
Calcium chloride, dihydrate	10035-04-8	100%	233-140-8 (anhydrous)
<b>Contains:</b>			
Calcium chloride, anhydrous	10043-52-4	77-80%	233-140-8
Water	7732-18-5	15-20%	231-791-2
Potassium chloride	7447-40-7	2-3%	231-211-8
Sodium chloride	7647-14-5	1-2%	231-598-3

**Section 4 First aid measures**

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire fighting measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Heat is generated when product mixes with water.

**Section 6 Accidental release measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.



**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Hygroscopic material. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulates not otherwise classified	None established	TWA: 15 mg/m <sup>3</sup> total dust	None established

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

<b>Appearance:</b> Solid. White flakes.	<b>Evaporation rate ( = 1):</b> Not applicable	<b>Partition coefficient:</b> Not applicable
<b>Odor:</b> No odor.	<b>Flammability (solid/gas):</b> Data not available.	<b>Auto-ignition temperature:</b> Not applicable
<b>Odor threshold:</b> Data not available.	<b>Explosion limits: Lower / Upper:</b> Not applicable	<b>Decomposition temperature:</b> Data not available.
<b>pH:</b> Data not available.	<b>Vapor pressure (mm Hg):</b> Negligible	<b>Viscosity:</b> Data not available.
<b>Melting / Freezing point:</b> 772°C (1422°F)	<b>Vapor density (Air = 1):</b> Data not available	<b>Molecular formula:</b> CaCl <sub>2</sub> ·2H <sub>2</sub> O
<b>Boiling point:</b> Data not available	<b>Relative density (Specific gravity):</b> Data not available	<b>Molecular weight:</b> 147.02
<b>Flash point:</b> Not applicable	<b>Solubility(ies):</b> Soluble in water.	

## Section 10 Stability and reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Hygroscopic material. Avoid moisture.

**Incompatible materials:** Heat is generated when mixed with water. Spattering and boiling can occur. Avoid contact with sulfuric acid. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as zinc and sodium.

**Hazardous decomposition products:** None known.

## Section 11 Toxicological information

**Acute toxicity:** Oral-rat LD50: 2100 mg/kg ; Dermal-rabbit LD50: >5000 mg/kg

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Dust may cause irritation to the upper respiratory tract (nose and throat).

Ingestion: Low toxicity if swallowed. However, large amounts may result in gastrointestinal irritation or ulceration.

Skin: Contact with skin may cause irritation and/or defatting on prolonged contact.

Eyes: Contact with eyes may cause severe irritation and/or corneal injury.

**Signs and symptoms of exposure:** See Potential health effects above.

**Additional information:** RTECS #: EV9810000

## Section 12 Ecological information

**Toxicity to fish:** Lepomis macrochirus (bluegill) LC50: 8,350-10,650 mg/L

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (water flea), LC50: 759-3,005 mg/L

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2020 ERG Guide #:** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Calcium chloride	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

**SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

**LIGHTER**

**Section 1. PRODUCT AND COMPANY IDENTIFICATION**

**GHS Product Identifier:** Lighter  
**Model No.:** SE-9000  
**Product Type:** Compressed Gas  
**Recommended Use:** Create flame to light gas appliances, candles, fire logs, charcoal, camp and fireplace fires, chafing fuel, torches, lanterns and similar items.  
**Supplier:** American Lighter, Inc.  
**Address:** 5690 Bandini Blvd., Bell, CA 90201, USA  
**General Telephone No.:** 323-266-1950  
**Transportation Emergency Telephone No.:** Chemtrec: 1-800-424-9300

**Section 2. HAZARDS IDENTIFICATION**

**OSHA/HCS Status:** This material is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Classification:** Flammable Gas, Hazard Class 2.1

**GHS Label Elements:**

**Hazard Pictograms**



**Signal Word:** Danger  
**Hazard Statements:** Extremely flammable.  
Contents under pressure.  
Keep out of reach of children.

**Precautionary Statements:** Point nozzle away from face, hands and clothing.  
Contains flammable gas under pressure.  
Do not use near sparks or open flame.  
Never puncture or put in fire.  
Never expose to heat above 122°F (50°C) or to prolonged sunlight.  
Be sure flame is completely out after each use.  
Do not use to light cigarettes, cigars or pipes.  
Follow all instructions and warnings provided by manufacturer of appliance, grill, outdoor stove, lantern, candle, torch, charcoal, lighter fluid or any other item when using this product.  
Do not keep lit for more than 30 seconds.  
Extreme heat is present above the visible flame. Extra care should be taken to prevent burns, injury or fire.  
Metal nozzle tip can get very hot. Do not touch during or immediately after use.

**Disposal:** Disposal must be in compliance with requirements of State and Federal hazmat and waste disposal regulations.

**Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	%
Butane (n-Butane)	106-97-8	90
Propane (n-Propane, Propyl Hydride)	74-98-6	10

(See Section 8 for Exposure Limits.)

**Section 4. FIRST AID MEASURES**

<b>Inhalation:</b>	Causes displacement of oxygen in respiratory system. Move exposed person to fresh air. For respiratory distress give air, oxygen and administer cardio-pulmonary resuscitation as needed.
<b>Skin Contact:</b>	May cause irritation to skin. Flush off immediately with water. Frozen skin should be flooded with warm water (105-115°F). Clothing frozen to skin should be thawed before removal. Seek medical attention if irritation persists.
<b>Eye Contact:</b>	May cause burns or irritation to eye. Remove contact lenses and immediately flush with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Seek medical attention immediately.
<b>Ingestion:</b>	Ingestion is considered unlikely. If accidentally swallowed obtain immediate medical attention.
<b>Section 5. FIRE FIGHTING MEASURES</b>	
<b>Suitable Extinguishing Media:</b>	Use carbon dioxide, dry powder or water spray to extinguish fire.
<b>Fire Fighting Procedures:</b>	Confine fire to immediate area. Disperse liquid or vapor if leaks occur.
<b>Unusual Fire and Explosion Hazards:</b>	Will form explosive mixtures in air. Vapors from liquified gas initially heavier than air and will spread along ground. Vapors may travel back to ignition source and flash back.
<b>Protective Equipment:</b>	For large fires in confined areas, use self-contained breathing apparatus. Do not inhale combustion or erupted gases.
<b>Section 6. ACCIDENTAL RELEASE MEASURES</b>	
<p>Keep unnecessary people away; isolate hazard and deny entry.  Stay upwind; keep out of low areas (also see Section 8).  Remove all ignition sources.  Ventilate area of leak to disperse the gas.  All equipment used in handling the release must be grounded.  For high gas concentrations use NIOSH/MSHA approved SCBA.</p>	
<b>Section 7. HANDLING AND STORAGE</b>	
<b>Handling:</b>	Keep away from heat, sparks and flame. Also keep away from food, drink and animal feed.
<b>Storage:</b>	Store in a cool, dry place with adequate cross-ventilation. Do not store in temperatures exceeding 122°F (50°C) or expose to direct sunlight. Do not store with strong acids (e.g. hydrochloric acid, sulfuric acid), strong bases (e.g. sodium hydroxide, potassium hydroxide), oxidizing agents (e.g. perchlorates, peroxides, permanganates, chlorates, chlorine, fluorine, bromine), copper and mixtures of nickel carbonyl and oxygen.
<b>Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
<b>Exposure Limits:</b>	<b>Component, Butane (n-Butane)</b> - 800 PPM (ACGIH TLV, NIOSH) <b>Component, Propane (n-Propane, Propyl Hydride)</b> - 1000 PPM (ACGIH TLV, NIOSH, OSHA PEL)
<b>Engineering Controls:</b>	Ensure adequate ventilation of working area. Use only intrinsically safe electrical equipment approved for use in classified areas.
<b>Personal Protective Equipment:</b>	None under normal conditions. In the event of an accidental release, firefighters and emergency personnel should wear positive pressure self-contained breathing apparatus (SCBA) (NIOSH/MHSA approved) for high concentrations. Personnel handling accidental releases or leaks should wear rubber gloves and ANSI approved chemical worker goggles.
<b>Section 9. PHYSICAL AND CHEMICAL PROPERTIES</b>	

<b>Appearance:</b>	Liquified gas under pressure. Clear, odorless.
<b>pH:</b>	Not applicable.
<b>Melting Point/Freezing Point:</b>	-305°F (-187°C)
<b>Initial Boiling Point and Range:</b>	31.1°F (-0.5°C) at 1,013.25 hPa
<b>Flash Point:</b>	<-76°F (<-60°C), Method ASTM D92
<b>Evaporation Rate:</b>	High
<b>Flammability (solid, gas):</b>	Gas
<b>Lower Flammability Limit:</b>	1.8% (V)
<b>Upper Flammability Limit:</b>	8.5% (V)
<b>Vapor Pressure:</b>	2,399.8 hPa at 68°F (20°C)
<b>Vapor Density:</b>	2.007 at 70°F (21.1°C), (Air = 1.0)
<b>Relative Density:</b>	0.56 at 59°F (15°C)
<b>Solubility in Water:</b>	17 cc per 1000 cc of Water @ 170.6°F (77°C)
<b>Partition Coefficient (Octanol/Water):</b>	Not Available
<b>Auto Ignition Temperature:</b>	549°F (287°C)
<b>Decomposition Temperature:</b>	Heating may cause a fire or explosion. Material does not decompose at ambient temperatures. Carbon monoxide and non-combusted hydrocarbons (smoke) are possible hazardous decomposition products.

#### Section 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Possibility of Hazardous Reactions:</b>	Can react with strong acids, strong oxidizers and copper. Explosion hazard when exposed to carbonyl/oxygen mixture.
<b>Conditions to Avoid:</b>	Keep away from flame, sparks, excessive temperatures and open flame.
<b>Incompatible Materials:</b>	Can react with strong acids, strong oxidizers and copper.
<b>Reactivity and Hazardous</b>	Decomposition Products: Vapors may form an explosive mixture with air. Hazardous polymerization does not occur.

#### Section 11. TOXICOLOGICAL INFORMATION

<b>Inhalation:</b>	May cause central nervous system disorder (e.g. narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Simple asphyxiant: acts by displacing oxygen in the lungs thereby diminishing the supply of oxygen available to the blood and tissues. Symptoms include shortness of breath, rapid heart rate, incoordination, lethargy, headaches, nausea, vomiting and disorientation. Continued lack of oxygen may result in convulsions, loss of consciousness and death. Since exercise increases the tissue need for oxygen, symptoms will occur more quickly during exertion in an oxygen-deficient environment. Exposure to high concentrations may cause cardiac sensitization.
<b>Ingestion:</b>	Considered unlikely.
<b>Skin and Eye Contact:</b>	Rapid release of liquified gases under pressure may cause frost burns of exposed tissues (skin, eye) due to evaporative cooling.
<b>Further Information:</b>	Chronic Effects and/or Target Organ Data - May cause central nervous system disorder (e.g. narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite (cold burn). Simple asphyxiant: acts by displacing oxygen in the lungs thereby diminishing the supply of oxygen available to the blood and tissues. Symptoms include shortness of breath, rapid heart rate, incoordination, lethargy, headaches, nausea, vomiting and disorientation. Continued lack of oxygen may result in convulsions, loss of consciousness and death. Since exercise increases the tissue need for oxygen, symptoms will occur more quickly during exertion in an oxygen-deficient environment. Oxygen in enclosed spaces should be maintained at normal atmospheric percentage (about 21% by volume).

<b>Components:</b>	<b>Butane</b>	<b>CAS No. 106-97-8</b>	<u>Skin Irritation:</u> Classification - Irritating to skin. Result - Skin irritation.
	<b>Propane</b>	<b>CAS No. 74-98-6</b>	
			<u>Eye Irritation:</u> Classification - Irritating to eyes. Result - Mild eye irritation.
	<b>NTP</b>		No component of this product which is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
	<b>IARC</b>		No component of this product which is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.
	<b>OSHA</b>		No component of this product which is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.






**Section 12. ECOLOGICAL INFORMATION**

<b>Bioaccumulation:</b>	Accumulation in aquatic organisms is unlikely.
<b>Toxicity to Fish:</b>	Not expected to be harmful to aquatic organisms.
<b>Additional Ecological Information:</b>	Liquid release is only expected to cause localized, non-persistent environmental damage, such as freezing. Biodegradation of this product may occur in soil and water. Volatilization is expected to be the most important removal process in soil and water. This product is expected to exist entirely in the vapor phase in ambient air.

**Section 13. DISPOSAL CONSIDERATIONS**

<b>Disposal:</b>	Discharge remaining fuel from lighters at a moderate rate in well ventilated area without ignition sources. Dispose of empty lighters in accordance with state, local and federal requirements.
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**Section 14. TRANSPORT INFORMATION**

<b>CFR:</b>	Proper Shipping Name -	Lighters	
	UN No. -	1057	
	Class -	2.1	
	Packing Group -	None	
<b>DOT/TDG:</b>	Proper Shipping Name -	Lighters	
	UN No. -	1057	
	Class -	2.1	
	Packing Group -	None	
<b>IATA Cargo Transport:</b>	UN No. -	1057	
	Description of the Goods -	Lighters	
	Class -	2.1	
	ICAO - Labels -	2.1	
<b>IATA Passenger Transport:</b>	UN No. -	1057	
	Description of the Goods -	Lighters	
	Class -	2.1	
	ICAO - Labels -	2.1	
<b>IMDG:</b>	UN No. -	1057	
	Description of the Goods -	Lighters	
	Class -	2.1	
	IMDG - Labels -	2.1	
	EmS Number -	F-D S-U	
	Marine Pollutant -	No	

**Sectoin 15. REGULATORY INFORMATION**

<b>Consumer Safety:</b>	See ASTM F400-10, ASTM F2201-10, ISO 9994, ISO 22702, in addition to various national and regional laws, regulations and standards, such as the the Lighters Regulations of the Hazardous Products Act of Canada, CEN, EU, etc.
<b>Child Safety:</b>	See 16 CFR Parts 1210 and 1212, in addition to various national and regional laws, regulations and standards, such as the Lighters Regulations of the Hazardous Products Act of Canada, CEN, EU, etc.
<b>CERCLA Section 103 and SARA Section 304 (Release to the Environment):</b>	The CERCLA definition of hazardous substances contains a "petroleum exclusion" which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act, may apply.
<b>TSCA Status:</b>	Butane and Propane are on the TSCA inventory.
<b>DSL Status:</b>	Butane and Propane are on the Canadian DSL list.
<b>SARA 311/312 Hazards:</b>	Fire Hazard Acute Health Hazard
<b>PENN RTK (Pennsylvania Worker and Community Right-to-Know Law):</b>	Components: Butane CAS No. 106-97-8 Propane CAS No. 74-98-6
<b>MASS RTK (Massachusetts Commonwealth Right-to-Know Law):</b>	Components: Butane CAS No. 106-97-8 Propane CAS No. 74-98-6
<b>NJ RTK (New Jersey Worker and Community Right-to-Know Act):</b>	Components: Butane CAS No. 106-97-8 Propane CAS No. 74-98-6
<b>California Proposition 65:</b>	This product does not contain any chemicals known to the State of California to cause cancer, birth or any other reproductive defects.

**Section 16. OTHER INFORMATION****National Fire Protection Association (NFPA) Ratings:**

**Health - 1**  
**Flammability - 4**  
**Reactivity - 0**

This information is intended solely for the use of individuals trained in the NFPA system.

**Further Information:**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material components designated and may not be valid for such components used in combination with any other materials or in any process, unless specified in the text.

**Revision Date:**

2/2/2016