





# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	<div></div> <div>See Section 15.</div>
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

## Section 1. Chemical Product and Company Identification

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Common Name/ Trade Name	Choline Bicarbonate, 75% Solution	Catalog Number(s).	C2378
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS#	Mixture.
Commercial Name(s)	Not available.	RTECS	Not applicable.
Synonym	Ethanaminium, 2-hydroxy-N,N,N-trimethyl, carbonate (1:1) salt Choline hydrogen carbonate	TSCA	TSCA 8(b) inventory: Choline Bicarbonate; water
Chemical Name	Not applicable.	CI#	Not available.
Chemical Family	Not available.	<b>IN CASE OF EMERGENCY</b> <a href="tel:800-424-9300">CHEMTREC (24hr) 800-424-9300</a>  CALL (310) 516-8000	
Chemical Formula	Not applicable.		
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

## Section 2. Composition and Information on Ingredients

		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Choline Bicarbonate	78-73-9				70-80
2) Water	7732-18-5				20-30
<b>Toxicological Data on Ingredients</b> Choline Bicarbonate LD50: Not available. LC50: Not available.					

## Section 3. Hazards Identification

Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Slightly hazardous in case of inhalation
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Serious Inhalation</b>	Not available.
<b>Ingestion</b>	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	Non-flammable.
<b>Auto-Ignition Temperature</b>	Not applicable.
<b>Flash Points</b>	Not applicable.
<b>Flammable Limits</b>	Not applicable.
<b>Products of Combustion</b>	Not available.
<b>Fire Hazards in Presence of Various Substances</b>	Not applicable.
<b>Explosion Hazards in Presence of Various Substances</b>	Non-explosive in presence of open flames and sparks, of shocks.
<b>Fire Fighting Media and Instructions</b>	Not applicable.
<b>Special Remarks on Fire Hazards</b>	Not available.
<b>Special Remarks on Explosion Hazards</b>	Not available.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
<b>Large Spill</b>	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Section 7. Handling and Storage**

<b>Precautions</b>	Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 8°C (46.4°F). Refrigerate.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
<b>Personal Protection</b>	Synthetic apron. Gloves (impervious). Splash goggles. Respiratory protection is not necessary for normal handling. Adequate general (room) ventilation or local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits</b>	Not available.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Liquid.	<b>Odor</b>	Not available.
<b>Molecular Weight</b>	165.19	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available	<b>Color</b>	Not available.
<b>Boiling Point</b>	The lowest known value is 100°C (212°F) (Water).		
<b>Melting Point</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	1.15 - 1.17 (Water = 1)		
<b>Vapor Pressure</b>	The highest known value is 2.3 kPa ( @ 20°C) (Water) .		
<b>Vapor Density</b>	The highest known value is 0.62 (Air = 1) (Water).		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	See solubility in water.		
<b>Solubility</b>	Easily soluble in cold water.		

**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Incompatible materials
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents.

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<b>Choline Bicarbonate, 75% Solution</b>		<b>Page Number: 4</b>
<b>Corrosivity</b>	Not available.	
<b>Special Remarks on Reactivity</b>	Not available.	
<b>Special Remarks on Corrosivity</b>	Not available.	
<b>Polymerization</b>	Will not occur.	

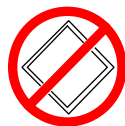
<b>Section 11. Toxicological Information</b>		
<b>Routes of Entry</b>	Absorbed through skin. Eye contact. Inhalation.	
<b>Toxicity to Animals</b>	LD50: Not available. LC50: Not available.	
<b>Chronic Effects on Humans</b>	Not available.	
<b>Other Toxic Effects on Humans</b>	Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Non-permeator by skin.	
<b>Special Remarks on Toxicity to Animals</b>	Not available.	
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.	
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: Inhalation of vapor or mist can cause respiratory tract irritation. Ingestion: May be harmful if swallowed.	

<b>Section 12. Ecological Information</b>		
<b>Ecotoxicity</b>	Not available.	
<b>BOD5 and COD</b>	Not available.	
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.	
<b>Toxicity of the Products of Biodegradation</b>	Not available.	
<b>Special Remarks on the Products of Biodegradation</b>	Not available.	

<b>Section 13. Disposal Considerations</b>		
<b>Waste Disposal</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	

<b>Section 14. Transport Information</b>		
<b>DOT Classification</b>	Not a DOT controlled material (United States).	
<b>Identification</b>	Not applicable.	
<b>Special Provisions for Transport</b>	Not applicable.	

DOT (Pictograms)



## Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

TSCA 8(b) inventory: Choline Bicarbonate; water

California  
Proposition 65  
Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances(EINECS No. 201-137-0).

Canada: Listed on Canadian Non-Domestic Substance List (NDSL).

China: Not listed on National Inventory.

Japan: Not Listed on National Inventory (ENCS).

Korea: Not listed on National Inventory (KECI).

Philippines: Not listed on National Inventory (PICCS).

Australia: Listed on AICS.

Other Classifications

**WHMIS (Canada)** CLASS D-2B: Material causing other toxic effects (TOXIC).**DSCL (EEC)**R36/37/38- Irritating to eyes,  
respiratory system and skin.S26- In case of contact with eyes, rinse  
immediately with plenty of water and seek  
medical advice.  
S37/39- Wear suitable gloves and eye/face  
protection.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	C

**National Fire Protection  
Association (U.S.A.)**

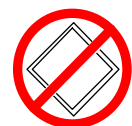
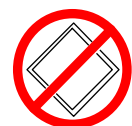
Health



Flammability

Reactivity

Specific hazard

**WHMIS (Canada)  
(Pictograms)****DSCL (Europe)  
(Pictograms)****TDG (Canada)  
(Pictograms)****ADR (Europe)  
(Pictograms)****Protective Equipment**

Gloves (impervious).



Synthetic apron.



Wear appropriate respirator when  
ventilation is inadequate.  
Splash goggles.

### Section 16. Other Information

**MSDS Code** C2241

**References** Not available.

**Other Special  
Considerations** Not available.

Validated by Sonia Owen on 3/26/2008.

Verified by Sonia Owen.

Printed 5/22/2008.

CALL (310) 516-8000

#### Notice to Reader

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*