

Material Safety Data Sheet

Buckman's Liquid Shock

(EPA Reg. No. 42052-20001)

Section I

Distributor's Name and Address Buckman's, Inc. 105 Airport Road Pottstown, PA 19464-3438	Emergency Telephone Number Chemtrec: 800-424-9300 Medical Emergencies: 800-451-8346 (Group Code 5942)
Manufacturer's Name and Address Buckman's, Inc. 105 Airport Road Pottstown, PA 19464-3438	Telephone Number for Information 610-495-7495
Date Prepared May 25, 2005	Signature of Preparer (optional)

Section II: Hazard Ingredients / Identity Information

Hazardous Components (CAS Number)	OSHA PEL	ACGIH TLV	Other Limits	Percent (optional)
Sodium Hypochlorite (7681-52-9)	1 ppm as Cl ₂ ceiling	1 ppm as Cl ₂ ceiling	None	13.15% to 12.5%
Sodium Hydroxide (1310-73-2)	2 ppm ceiling	2 ppm ceiling	None	1.0%

Section III: Physical/Chemical Characteristics

Appearance: Colorless to light yellow-green	Specific Gravity: 1.190 to 1.215
Odor: Chlorine-like	Solubility in Water: 100%
Boiling Point: Decomposes > 110°C (230°F)	Freeze Point: Approximately -3°F
Vapor Pressure (mm Hg): 12.1 @ 68°F	pH: 12 @ 100 g/l
Physical State: Liquid	

Section IV: Fire and Explosion Hazard Data

Flash Point (Test Method): Not Applicable	Flammable Limits:	LEL: Not Applicable	UEL: Not Applicable
Extinguishing Media: Water spray, fog, foam, dry chemical, carbon dioxide or agents suitable for materials surrounding the fire.			
Special Fire Fighting Procedures: Use self-contained breathing apparatus and full protective equipment. Acid contamination will produce very irritating fumes similar to chlorine.			
Unusual Fire and Explosion Hazards: Sodium Hypochlorite or its solutions decompose when heated. Decomposition products may cause containers to rupture or explode. Vigorous reaction is possible with organic materials or oxidizing agents and may result in fire.			

Section V: Reactivity Data

Stability: Strong oxidizer; stability decreases with concentration, heat, light, decrease in pH and contamination by metals	Conditions to Avoid: High temperatures, direct sunlight
Incompatibility (Materials to Avoid): Heavy metals, reducing agents, organics, ether and acids	Hazardous Decomposition or Byproducts: Acid fumes
Hazardous Polymerization: Not known to occur	Conditions to Avoid: None known

Section VI: Health Hazard Data

Route(s) of Exposure: Inhalation, skin, eye and ingestion	
Health Hazards (Acute and Chronic)	
The toxicity and corrosivity of Sodium Hypochlorite is a function of concentration. Industrial grades of higher concentrations than household bleach (5.25% NaOCl) are more toxic and corrosive. Pentahydrate: 45% Concentration	
Ingestion: Acute LD ₅₀ (rat) = 8,910 mg/kg May cause pain and inflammation of the mouth and digestive system, burns and perforation of the esophagus or stomach, vomiting, circulatory collapse, confusion, delirium and coma.	Inhalation: No data Inhalation of hypochlorous acid fumes may cause severe respiratory tract irritation and pulmonary edema.
Skin Contact: No data Corrosive; may cause severe skin or chemical burns to broken skin.	Eye Contact: No data Corrosive; may cause severe irritation, burns and/or damage.
Dermal: Acute LD ₅₀ (rabbit) = 10,000 mg/kg Chronic: No data	Skin Sensitization: Not considered a sensitizer Synergistic Materials: See Section V

Section VI: Health Hazard Data (continued)

Effects of Acute Exposure: Corrosive and strongly irritating to the eyes, skin and respiratory tract. Inhalation of fumes may cause pulmonary edema. Ingestion may cause burns to the mouth and digestive tract and abdominal distress.	Effects of Chronic Exposure: No data
Reproductive Hazard Potential: No data	Mutagenicity: No data
Teratogenicity: No data	Synergistic Materials: See Section V
Carcinogenicity: NOT listed as carcinogenic by IARC, NTP or OSHA.	
Emergency and First Aid Procedures	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-451-8346 (Group Code 5942) for emergency medical treatment information.	
Ingestion: Immediately call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.	Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin Contact: Take off contaminated clothing. Immediately rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.	Inhalation: Seek fresh air. If breathing is difficult, have qualified person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation; get immediate medical attention.
Note to Physician: Sodium hypochlorite is an alkaline corrosive. For exposure by ingestion do not use emesis, lavage or acidic antidotes. Immediately dilute by giving milk, melted ice cream, beaten egg white, starch paste or antacids such as milk of magnesia, aluminum hydroxide gel or magnesium trisilicate gel. Avoid sodium bicarbonate because of carbon dioxide release. Sodium thiosulfate solution may prove beneficial by reducing unreacted material.	

Section VII: Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Do not allow spilled material to enter sewers or streams. Flush area with water to dilute spill as much as possible and pump into polyethylene containers for disposal. Avoid heat and contamination with acid materials. Do not use combustible materials such as sawdust to absorb Sodium Hypochlorite solutions.
Waste Disposal Method: Reduce with agents such as bisulfites or ferrous salt solutions. Some heat will be produced. Keep on alkaline side and dilute with copious amounts of water. Main end product is salt water. Dilute product or rinsates that cannot be used before disposal in a sanitary sewer. For large scale disposal: Comply with all applicable governmental regulations. For small scale disposal: If container is empty: Do not reuse this container. Place in trash or offer for recycling if available. If container is partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused undiluted product down any indoor or outdoor drain.
Precautions to be Taken in Handling and Storing: Do not contaminate food or feed by storage, disposal or cleaning of equipment. Store in a cool, dry area away from direct sunlight and heat to avoid deterioration. Do not store adjacent to chemicals that may react if spillage occurs. Comply with DOT regulations when shipped. If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition). Do not mix or contaminate with ammonia, hydrocarbons, acids, alcohols or ethers. Mixing this product with chemicals (e.g., ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes.

Section VIII: Controls Measures

Respiratory Protection: NIOSH/MSHA-approved respirator, following manufacturer's recommendations (used as a precautionary measure where airborne contaminants may occur).	
Ventilation: Good general plus local exhaust at points of emission.	
Protective Gloves: Impervious (such as rubber, neoprene or vinyl)	Eye Protection: Chemical safety goggles plus full face shield, when appropriate, to protect from splashing
Other Protective Clothing/Equipment: Impervious, including rubber safety shoes. Eye wash facility and emergency shower in close proximity.	

Section IX: General Regulatory Information

HMIS Hazard Ratings: Health = 3 (serious); Fire = 2 (minimal); Reactivity = 1 (slight); WARNING – Corrosive, Oxidizing Agent		
Section 311 of The Clean Water Act lists this product as a hazardous substance, which, if discharged to water, may require immediate response to mitigate danger to public health and welfare. Spills of 100 pounds or more must be reported to the National Response Center at the following number: 1-800-424-8802 .		
Material is contained on a composite list as required under 101(14) of CERCLA .		
NSF Certification: This product has been classified as an approved drinking water treatment chemical under ANSI/NSF Standard 60 by Underwriter's Laboratories.		
DOT Transport Information		
Shipping Name: Hypochlorite Solutions	Hazard Class: 8	Identification Number: UN1791
Packing Group: III	Hazardous Substance: RQ 100# (NaOCl)	Marine Pollutant: Not Applicable

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