



# Material Safety Data Sheet

## Liquid Chlorine Bleach

### Section 1. Chemical Product and Company Identification

Common Name	: Liquid Chlorine Bleach		
Supplier	: Dober Group 14461 S. Waverly Ave. Midlothian, IL 60445	Manufacturer	: Dober Group 14461 S. Waverly Ave. Midlothian, IL 60445
Code	: 000795	Validation Date	: 8/30/2004.
Trade Name	: Liquid Chlorine Bleach	In Case of Emergency	: ChemTel 1-813-248-0585 1-800-255-3924
Material Uses	: Industrial and Institutional laundering.		

### Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight	UN Number
Sodium Hypochlorite	7681-52-9	13-15	UN1791

This material is classified as hazardous under OSHA regulations.

See Section 8 for Exposure Limits.

See Section 11 for Toxicological Data.

See Section 14 for Transport Information.

### Section 3. Hazards Identification

Physical State and Appearance	: Liquid.
Emergency Overview	: DANGER! CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. Do not get in eyes, on skin or on clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of Entry	: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Potential Acute Health Effects	<p>Eyes : Hazardous in case of eye contact (corrosive).</p> <p>Skin : Hazardous in case of skin contact (corrosive). Skin contact may produce burns.</p> <p>Inhalation : Hazardous in case of inhalation (lung irritant). of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.</p> <p>Ingestion : May be fatal if swallowed. May cause burns to mouth, throat and stomach.</p>
Potential Chronic Health Effects	<p><b>CARCINOGENIC EFFECTS:</b> Classified 3 (Not classifiable for human.) by IARC [Sodium Hypochlorite].</p> <p><b>MUTAGENIC EFFECTS:</b> Not available.</p> <p><b>TERATOGENIC EFFECTS:</b> Not available.</p>
Medical Conditions Aggravated by Overexposure	: Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Over-exposure signs/symptoms	: Not available.

See Toxicological Information (Section 11)

## Section 4. First Aid Measures

Eye Contact	: 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 immediately.
Skin Contact	: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
Notes to Physician	: No specific antidote. Medical staff must contact Poisons Information Center.

## Section 5. Fire Fighting Measures

Flammability of the Product	: Non-flammable.
Auto-ignition Temperature	: Not applicable.
Flash Points	: Not applicable.
Flammable Limits	: Not applicable.
Products of Combustion	: Not applicable.
Fire Hazards in Presence of Various Substances	: Not applicable.
Explosion Hazards in Presence of Various Substances	: Risks of explosion of the product in presence of mechanical impact: Not applicable. Risks of explosion of the product in presence of static discharge: Not applicable.
Fire Fighting Media and Instructions	: Not applicable.
Protective Clothing (Fire)	: Not applicable.
Special Remarks on Fire Hazards	: Not available.

## Section 6. Accidental Release Measures

Small Spill and Leak	: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	: Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7. Handling and Storage

Handling	: Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	: Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8. Exposure Controls, Personal Protection

Engineering Controls	: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
<u>Personal Protection</u>	
Eyes	: Face shield.
Body	: Synthetic apron.
Respiratory	: Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Hands	: Impervious gloves.
Feet	: Boots.

Protective Clothing  
(Pictograms)



Personal Protection in Case of a Large Spill : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

Exposure Limits

Product Name  
Sodium Hypochlorite

Exposure Limits  
AIHA WEEL (United States, 2003).

STEL: 2 mg/m<sup>3</sup> 15 minute(s). Form: All forms

Consult local authorities for acceptable exposure limits.

## Section 9. Physical and Chemical Properties

Physical State and appearance	: Liquid.
Color	: Colorless to light yellow.
Odor	: Chlorine.
Molecular Weight	: Not applicable.
Molecular Formula	: Not applicable.
pH	: 13.5 (Conc. (% w/w): 14) [Basic.]
Boiling/Condensation Point	: The lowest known value is 99.9°C (211.8°F) (Water).
Melting/Freezing Point	: -25°C (-13°F)
Specific Gravity	: 1.21 (Water = 1)
Vapor Pressure	: 2.3 kPa (17.5 mm Hg) (at 20°C)
Vapor Density	: >1 (Air = 1)
Latency or Threshold	: 100% (v/v).
Evaporation Rate	: Not available.
Viscosity	: Not available.
LogK <sub>ow</sub>	: Not available.
Solubility	: Miscible in water.

## Section 10. Stability and Reactivity

Stability and Reactivity	: Unstable.
Conditions of Instability	: Decomposes on heating.
Incompatibility with Various Substances	: Reactive with oxidizing agents, reducing agents, combustible materials, organic materials, acids, alkalis.
Hazardous Decomposition Products	: These products are halogenated compounds, hydrogen chloride.
Hazardous Polymerization	: Will not occur.

## Section 11. Toxicological Information

### Toxicity Data

Ingredient Name	Test	Result	Route	Species
Sodium Hypochlorite	LD50 LC50	5800 mg/kg 293 ppm (1 hour(s))	Oral Inhalation	Mouse Rat

Chronic Effects on Humans : **CARCINOGENIC EFFECTS:** Classified 3 (Not classifiable for human.) by IARC [Sodium Hypochlorite]. Contains material which causes damage to the following organs: upper respiratory tract, skin, eye, lens or cornea

Other Toxic Effects on Humans : Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung irritant, lung corrosive).

Special Remarks on Toxicity to Animals : Not available.

Special Remarks on Other Toxic Effects on Humans : Not available.

Toxic Effects on Humans : Not available.

## Section 12. Ecological Information

### Ecotoxicity Data

Ingredient Name	Species	Period	Result
Sodium Hypochlorite	Daphnia magna (EC50)	48 hour(s)	0.04 mg/l
	Daphnia magna (EC50)	48 hour(s)	0.17 mg/l
	Daphnia magna (EC50)	48 hour(s)	1.57 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	0.059 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	0.09 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	0.2 mg/l

BOD and COD	: Not available.
Biodegradable/OECD	: Not available.
Mobility	: Not available.
Products of Degradation	: These products are halogenated compounds. Some metallic oxides.
Toxicity of the Products of Biodegradation	: The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	: Not available.

## Section 13. Disposal Considerations

Waste Information : Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

## Section 14. Transport Information

Regulatory Information	UN Number	Proper Shipping Name	Class	Packing Group	Label	Additional Information
United States (DOT)	UN1791	Hypochlorite solution	8	II		-
Canada (TDG)	UN1791	Hypochlorite solution	8	II		-
Mexico (NOM-004-SCT2-1994)	UN1791	Hypochlorite solution	8	II		-
IMDG Code	UN1791	Hypochlorite solution	8	II		-
IATA-DGR Class	UN1791	Hypochlorite solution	8	II		-

NAERG : 154

## Section 15. Regulatory Information

HCS Classification	: Corrosive Material
S. Federal Regulations	: TSCA 8(b) inventory: Water; Sodium Hypochlorite Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: Sodium Hypochlorite Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.  
 SARA 302/304/311/312 extremely hazardous substances: No products were found.  
 SARA 302/304 emergency planning and notification: No products were found.  
 SARA 302/304/311/312 hazardous chemicals: Sodium Hypochlorite  
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Hypochlorite: Immediate (Acute) Health Hazard

<u>SARA 313</u>		% by Weight								
Form R - Reporting Requirements	: No products were found.									
Supplier Notification	: No products were found.									
State Regulations	: Pennsylvania RTK: Sodium Hypochlorite: (environmental hazard, generic environmental hazard) Massachusetts RTK: Sodium Hypochlorite New Jersey: Sodium Hypochlorite California prop. 65: No products were found.									
WHMIS (Canada)	: E: Corrosive liquid. CEPA DSL: Water; Sodium Hypochlorite <b>This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.</b>									
Hazardous Ingredients Classification of the Degree of Risk (Mexico)	Ingredient Name Sodium Hypochlorite	<table border="1"> <tr> <td>Health</td> <td>3</td> </tr> <tr> <td>Flammability</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> <tr> <td>Other</td> <td></td> </tr> </table>	Health	3	Flammability	0	Reactivity	1	Other	
Health	3									
Flammability	0									
Reactivity	1									
Other										

## Section 16. Other Information

Label Requirements	: CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS.												
Hazardous Material Information System S.A.)	<table border="1"> <tr> <td>Health</td> <td>3</td> </tr> <tr> <td>Fire Hazard</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> <tr> <td>Personal Protection</td> <td>G</td> </tr> </table>	Health	3	Fire Hazard	0	Reactivity	1	Personal Protection	G				
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			Specific Hazard										

References	: - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. ANSI Z400.1, MSDS Standard, 2001. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002. - Official Mexican Standards NOM-018-STPS-2000 and NOM-004-SCT2-1994. -Manufacturer's Material Safety Data Sheet.
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Responsible Name	: Kemika XXI Inc. +1-450-435-7475
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Validation Date	: 8/30/2004.
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Date of Previous Issue	: Not applicable.
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Version	: 1
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### Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.