

Bison

MATERIAL SAFETY DATA SHEET

Revised

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS NUMBER : M7745 ISSUE DATE : 01-15-02

PRODUCT NAME : SODIUM HYPOCHLORITE (EPA)

Manufacturer's Name and Address : Occidental Chemical Corporation, Occidental Tower
5005 LBJ Freeway, P.O. Box 809050
Dallas, TX 75380 (972) 404-3800

24 HOUR EMERGENCY TELEPHONE : 1-800-733-3665 OR 972-404-3228

TO REQUEST AN MSDS : 1-800-699-4970

CUSTOMER SERVICE : 1-800-752-5151

PRODUCT USE : Bleach

CHEMICAL NAME : Hypochlorous acid, sodium salt

CHEMICAL FORMULA : NaOCl

SYNONYMS/Common Names : Chlorine bleach
Soda bleach**2. COMPOSITION/INFORMATION ON INGREDIENTS**CAS NUMBER / NAME
7732-18-5 Water

EXPOSURE LIMITS	PERCENTAGE	
PEL: Not Established	VOL	ND
TLV: Not Established	WT	85-86
PELZ2: Not Established		

COMMON NAMES:
(MW 18.02)Listed On (List Legend Below):
00 19 22 23 51

2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)

7681-52-9 Hypochlorous acid, sodium salt

EXPOSURE LIMITS	PERCENTAGE	
PEL: Not Established	VOL	ND
TLV: Not Established	WT	13-15
PELZ2:Not Established		

COMMON NAMES:
Sodium hypochlorite (MW 74.44)

Listed On(List Legend Below):
00 12 13 16 22 51

1310-73-2 Sodium hydroxide (Na(OH))

EXPOSURE LIMITS	PERCENTAGE	
PEL: 2 MG/M3 CEIL	VOL	ND
TLV: 2 MG/M3 CEIL	WT	1
PELZ2:Not Established		

COMMON NAMES:
CAUSTIC SODA (MW 40.00)

Listed On(List Legend Below):
00 12 13 21 22 51 56 57

LIST LEGEND

00 TSCA INVENTORY	12 PA HAZARDOUS SUBSTANCE
13 PA ENVIROMENTAL HAZ SUBSTANCE	16 NJ WORKPLACE HAZ SUBSTANCE LST
19 PA REQUIREMENT- 3% OR GREATER	21 NJ SPECIAL HEALTH HAZ SUB
22 CANADIAN DOMESTIC SUB LIST	23 NJ REQUIREMENT- 1% OR GREATER
51 EINECS	56 OSHA PERMISSIBLE EXPOSURE LIM.
57 ACGIH THRESHOLD LIMIT VALUES	

Revised

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****
*

STRONG OXIDIZING AGENT.

MAY CAUSE BURNS TO THE EYES, SKIN, AND MUCOUS MEMBRANES.

*
* Water clear to slight yellow color with distinctive chorine odor *

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

Inhalation, Ingestion.

TARGET ORGANS:

Eyes, Skin, Respiratory Tract, Gastrointestinal Tract.

3. HAZARDS IDENTIFICATION (Continued)

IRRITANCY:

Irritating to eyes, skin, respiratory tract and gastrointestinal tract. May cause chemical burns to these tissues.

SENSITIZING CAPABILITY:

No relevant data found.

REPRODUCTIVE EFFECTS:

No relevant data found.

CANCER INFORMATION:

Not classified as carcinogenic by NTP, IARC, OSHA, ACGIH, or NIOSH.

SHORT-TERM EXPOSURE (ACUTE)

INHALATION:

May cause coughing, sneezing or other symptoms of upper respiratory tract irritation. Exposure may result in lung tissue damage due to corrosive effects.

Severe exposures could result in chemical pneumonia.

EYES:

Strongly irritating to eyes. Exposure to vapor can cause tearing, conjunctivitis and burning of the eyes. Eye contact may cause corneal injury.

The severity of the effects depend on concentration and how soon after exposure the eyes are washed.

SKIN:

Contact may cause burns and tissue destruction.

INGESTION:

Can produce severe burns of the mouth, throat, esophagus and gastrointestinal tract with nausea, vomiting, abdominal pain and diarrhea.

REPEATED EXPOSURE (CHRONIC)

Prolonged or repeated contact with skin may result in moderate to severe skin irritation.

Prolonged or repeated exposure may result in lung damage.

SYNERGISTIC MATERIALS:

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders affecting target organs.

Revised

4. FIRST AID MEASURES

EYES:

Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN:

Immediately flush contaminated areas with water. Remove contaminated clothing and footwear. Wash contaminated areas with plenty of soap and water. Wash clothing before reuse. Discard footwear which cannot be decontaminated. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

Remove to fresh air if safe to transport. Otherwise attempt to provide fresh air by ventilation. If breathing is difficult, have a trained person administer oxygen. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY (911 or emergency transport services).

INGESTION:

Sodium hypochlorite is an alkaline corrosive. For exposure by ingestion do not use vomiting, lavage or acidic antidotes. Dilute immediately 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.

NOTES TO PHYSICIAN:

In addition to the alkalinity of the product, the continued generation of chlorine gas after ingestion can damage further the stomach mucous, depending on the amount ingested. Consideration may be given to removal of the product from the stomach, taking care to avoid perforation of esophagus or stomach. An ounce of 1% sodium thiosulfate or milk of magnesia may be helpful.

Revised

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable

Method: Not applicable

Autoignition Temperature: Not applicable

FLAMMABLE LIMITS IN AIR, BY % VOLUME

Upper: Not applicable
Lower: Not applicable

5. FIRE FIGHTING MEASURES (Continued)

EXTINGUISHING MEDIA:

Non-flammable / Non-combustible.

Use water spray, foam, dry chemicals, carbon dioxide, or other extinguishing medium as appropriate for surrounding fire.

FIRE FIGHTING PROCEDURES:

Wear NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

FIRE AND EXPLOSION HAZARD:

Material does not sustain combustion.

This product is non-flammable and non-explosive under normal conditions of use. At high temperatures this product can decompose to give off hydrogen chloride and chlorine gas.

SENSITIVITY TO MECHANICAL IMPACT:

Not sensitive.

SENSITIVITY TO STATIC DISCHARGE:

Not sensitive.

Revised

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Follow protective measures provided under Personal Protection in Section 8.

ENVIRONMENTAL PRECAUTIONS:

Do not allow entry into sewers and waterways.

METHODS FOR CLEANING UP:

For small spills, soak up with absorbent material and place in properly labeled containers for disposal.

For large spills, dike and pump into properly labeled containers for reclamation or disposal.

Revised

7. HANDLING AND STORAGE

HANDLING:

Do not eat, drink or smoke in areas where this material is used.

Wash thoroughly with soap and water after handling.

7. HANDLING AND STORAGE (Continued)

Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full.

Do not reuse containers.

SPECIAL MIXING AND HANDLING INSTRUCTIONS:

Do not allow contact with materials as noted in Section 10.

STORAGE:

Store in a cool, ventilated area away from incompatible materials (see Section 10).

Keep container tightly closed and properly labeled.

Revised

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Handle product in a well ventilated area.

If product is handled in an open system, the use of process enclosures, local exhaust ventilation, and/or other engineering controls should be considered to control airborne levels to below recommended exposure limits, or below acceptable levels where there are no limits.

The AIHA WEEL (Workplace Environmental Exposure Level) for sodium hypochlorite (CAS 7681-52-9) is 2 mg/m³ for a 15-minute STEL.

PERSONAL PROTECTION

RESPIRATORY:

A NIOSH approved respirator with N95 (dust, fume, mist) filter(s) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure.

Where the possibility exists for decomposition, a NIOSH approved respirator with acid gas cartridge(s) and N95 filter(s) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure.

A half facepiece air-purifying respirator can be used in concentrations up to 10X the acceptable exposure level and a full facepiece air-purifying respirator can be used in concentrations up to 50X the acceptable exposure level. Supplied air should be used when the level is expected to be above 50X the acceptable level, or when there is a potential for uncontrolled release.

A respiratory protection program that meets 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant use of a respirator.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

EYE/FACE:

Wear chemical safety goggles plus full face shield to protect against contact when appropriate (ANSI Z87.1).

SKIN:

Wear chemical resistant gloves such as butyl rubber, natural rubber, neoprene or nitrile.

Wear chemical resistant clothing and boots when potential for contact with the material exists.

OTHER:

Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1).

Revised

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Water clear to slight yellow color with distinctive chlorine odor

Odor Threshold: Approximately 2ppm

Specific Gravity (Water=1): 1.27

Vapor Pressure: Not applicable

Vapor Density (Air=1): Not applicable

Density: Not applicable

Evaporation Rate: Not available

% Volatiles by Wt: Not applicable

Boiling Point: 110°C (230°F)

Freezing Point: Not available

Melting Point: Not applicable

Solubility in Water (% by wt.): 100%

pH: 12

Octanol/Water Partition Coefficient: Not applicable

Thermal Decomposition Temperature: Not applicable

Other: Available chlorine, approximately 13%

VOC (% by wt;g/l): Not applicable

Revised

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

STABLE UNSTABLE

REACTS WITH:

<input type="checkbox"/> AIR	<input type="checkbox"/> OXIDIZERS	<input checked="" type="checkbox"/> METALS
<input type="checkbox"/> WATER	<input checked="" type="checkbox"/> ACIDS	<input checked="" type="checkbox"/> OTHER
<input checked="" type="checkbox"/> HEAT	<input type="checkbox"/> ALKALIS	<input type="checkbox"/> NONE

HAZARDOUS POLYMERIZATION:

OCCURS WILL NOT OCCUR

COMMENTS:

Avoid contact with heavy metals, reducing agents, organics, ether, ammonia and acids.

STRONG OXIDIZING AGENT.

HAZARDOUS DECOMPOSITION PRODUCTS:

Chlorine containing gases can be produced.

Revised

11. TOXICOLOGICAL INFORMATION

7681-52-9 Hypochlorous acid, sodium salt

This substance may be moderately toxic by the oral route at low concentrations. It is slightly toxic by the dermal route. At higher concentrations this substance may be severely irritating to the eyes and skin. Inhalation of fumes causes coughing and choking and may cause severe respiratory tract irritation and pulmonary edema. Ingestion causes irritation and corrosion of mucous membranes with pain and vomiting.

The toxicity and corrosivity of this substance is a function of concentration. Industrial grades of higher concentrations than household bleach (approximately 5%) may be associated with corrosive damage by all routes of exposure.

For further information call or write the address shown on page 1 of the MSDS.

Revised

12. ECOLOGICAL INFORMATION

7681-52-9 Hypochlorous acid, sodium salt

TOXICITY: This material is believed to be toxic to aquatic life in high concentrations. Small amounts or diluted material tends to act similar to chlorine in water treatment. In air, highly toxic decomposition products are formed.

12. ECOLOGICAL INFORMATION (Continued)

PERSISTENCE: No data available. Based on physical and chemical properties, this material is believed to be unlikely to persist in the environment.

BIOACCUMULATION: No data available. Based on physical and chemical properties, this material is believed to be unlikely to bioaccumulate in the ecosystem.

For further information call or write the address shown on page 1 of the MSDS.

13. DISPOSAL CONSIDERATIONS

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Revised

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Hypochlorite Solutions

DOT HAZARD CLASS: 8

DOT IDENTIFICATION NUMBER: UN1791

DOT PACKING GROUP: III

DOT HAZARDOUS SUBSTANCE(S): RQ 100 Lbs. (Sodium Hypochlorite)

DOT MARINE POLLUTANT(S): Not Applicable

ADDITIONAL DESCRIPTION REQUIREMENT: Not Applicable

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

TSCA:

All components of this product that are required to be on the TSCA inventory are listed on the inventory.

15. REGULATORY INFORMATION (Continued)

SARA/TITLE III HAZARD CATEGORIES:

If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR 370. Please consult those regulations for details.

Immediate(Acute) Health:	<u>YES</u>	Reactive Hazard	<u>YES</u>
Delayed(Chronic) Health:	<u>NO</u>	Sudden Release of Pressure	<u>NO</u>
Fire Hazard:	<u>YES</u>		

HMIS HAZARD RATINGS:

HEALTH HAZARD: 3 FIRE HAZARD: 0 REACTIVITY: 2

STATE REGULATIONS:

See Section 2. COMPOSITION/INFORMATION ON INGREDIENTS list legend for applicable state regulation.

INTERNATIONAL REGULATIONS:

Consult the regulations of the importing country.

CANADA:

WHMIS Hazard Class: D2B, E

16. OTHER INFORMATION

For additional non-emergency health, safety or environmental information telephone (972) 404-2076 or write to:

Occidental Chemical Corporation
Product Stewardship Department
5005 LBJ Freeway
P.O. Box 809050
Dallas, Texas 75380

16. OTHER INFORMATION (Continued)

MSDS LEGEND:

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service Registry Number

CEILING = Ceiling Limit (15 Minutes)

CEL = Corporate Exposure Limit

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit (OSHA)

STEL = Short Term Exposure Limit (15 Minutes)

TDG = Transportation of Dangerous Goods (Canada)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average (8 Hours)

WHMIS = Worker Hazardous Materials Information System (Canada)

* = See Section 3 Hazards Identification - Repeated Exposure(Chronic) Information

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Revised

17. WARNING LABEL INFORMATION

This product is registered with the United States Environmental Protection Agency (EPA) as a pesticide, as required under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is shipped under a FIFRA approved product label. It is a violation of Federal law to use this product for pesticidal applications in a manner inconsistent with the FIFRA labeling.

Repackers or formulators must obtain their own EPA registration and FIFRA approved label to legally market this product for pesticidal applications.

This product may be used by manufacturers of non-pesticidal products provided no pesticidal claim is made.