



## MATERIAL SAFETY DATA SHEET

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### SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**Occidental Chemical Corporation**

**5005 LBJ Freeway**

**P.O. Box 809050**

**Dallas, Texas 75380-9050**

**24 HOUR EMERGENCY TELEPHONE:**

**1-800-733-3665 or 1-972-404-3228 (U.S.);**

**32.3.575.55.55 (Europe);**

**1800-033-111 (Australia)**

**TO REQUEST AN MSDS:**

**1-866-295-5278 or 1-615-399-5148**

**CUSTOMER SERVICE:**

**1-800-752-5151 or 1-972-404-3800**

**MSDS NUMBER:** M7745

**SUBSTANCE: SODIUM HYPOCHLORITE (EPA)**

**SYNONYMS:**

Chlorine bleach; Soda bleach

**PRODUCT USE:** bleaching agent, chemical intermediate

**REVISION DATE:** Nov 18 2003

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### SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT: SODIUM HYPOCHLORITE**

**CAS NUMBER:** 7681-52-9

**PERCENTAGE:** 13-15

**COMPONENT: SODIUM HYDROXIDE**

**CAS NUMBER:** 1310-73-2

**PERCENTAGE:** 0-1

**COMPONENT: WATER**

**CAS NUMBER:** 7732-18-5

**PERCENTAGE:** 70-76

**COMPONENT: SODIUM CHLORIDE**

**CAS NUMBER:** 7647-14-5

**PERCENTAGE:** 11-14.5

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## SECTION 3 HAZARDS IDENTIFICATION

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**NFPA RATINGS (SCALE 0-4):** HEALTH=3 FIRE=0 REACTIVITY=1

**HMS RATINGS (SCALE 0-4):** HEALTH=3 FLAMMABILITY=0 REACTIVITY=1

**EMERGENCY OVERVIEW:**

**COLOR:** colorless to pale yellow

**PHYSICAL FORM:** liquid

**ODOR:** characteristic bleach odor

**MAJOR HEALTH HAZARDS:** MAY CAUSE BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND GASTROINTESTINAL TRACT. MAY CAUSE PERMANENT EYE DAMAGE.

**PHYSICAL HAZARDS:** Strong oxidizer.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**SHORT TERM EXPOSURE:** burns, cough, pulmonary edema

**LONG TERM EXPOSURE:** to our knowledge, no effects are known

**SKIN CONTACT:**

**SHORT TERM EXPOSURE:** burns

**LONG TERM EXPOSURE:** dermatitis

**EYE CONTACT:**

**SHORT TERM EXPOSURE:** burns, eye damage, blindness

**LONG TERM EXPOSURE:** eye damage, blindness

**INGESTION:**

**SHORT TERM EXPOSURE:** burns

**LONG TERM EXPOSURE:** to our knowledge, no effects are known

**CARCINOGEN STATUS:**

**OSHA:** No

**NTP:** No

**IARC:** No

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## SECTION 4 FIRST AID MEASURES

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**INHALATION:** If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. 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.

**SKIN CONTACT:** Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. Discard footwear which cannot be decontaminated. GET MEDICAL ATTENTION IMMEDIATELY.

**EYE CONTACT:** 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.

**INGESTION:** Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

**NOTE TO PHYSICIAN:** The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage.

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## SECTION 5 FIRE FIGHTING MEASURES

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**FIRE AND EXPLOSION HAZARDS:** May release toxic gases.

**EXTINGUISHING MEDIA:** Use extinguishing agents appropriate for surrounding fire.

**FIRE FIGHTING:** Wear NIOSH approved positive-pressure self-contained breathing apparatus. Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**SENSITIVITY TO MECHANICAL IMPACT:** Not sensitive

**SENSITIVITY TO STATIC DISCHARGE:** Not sensitive

**FLASH POINT:** not flammable

**HAZARDOUS COMBUSTION PRODUCTS:**

Combustion products: hydrogen chloride, chlorine

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

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**OCCUPATIONAL RELEASE:**

Eliminate all sources of ignition. Stop leak if possible without personal risk. Shovel dry material into suitable container. Liquid material may be removed with a vacuum truck. Keep out of water supplies and sewers. Stay upwind and keep out of low areas. Evacuation of surrounding area may be necessary for large spills. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202)426-2675 (USA).

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## SECTION 7 HANDLING AND STORAGE

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**STORAGE:** Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a corrosion resistant container such as titanium or tantalum with an adequate relief device. Store in a well-ventilated area. Avoid direct sunlight. Avoid heat, flames, sparks and other sources of ignition. Keep separated from incompatible substances.

**HANDLING:** Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Use only with adequate ventilation.

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## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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**EXPOSURE LIMITS:**

**SODIUM HYPOCHLORITE:**

2 mg/m<sup>3</sup> AIHA recommended STEL 15 minute(s) (WEEL)

**SODIUM HYDROXIDE:**

2 mg/m<sup>3</sup> OSHA TWA  
2 mg/m<sup>3</sup> OSHA ceiling (vacated by 58 FR 35338, June 30, 1993)  
2 mg/m<sup>3</sup> ACGIH ceiling  
2 mg/m<sup>3</sup> MEXICO peak

**VENTILATION:** Use closed systems when possible. Provide local exhaust ventilation where vapor or mist may be generated. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Contaminated clothing should be removed, then discarded or laundered.

**GLOVES:** Wear appropriate chemical resistant gloves.

**PROTECTIVE MATERIAL TYPES:** natural rubber, neoprene, nitrile, polyvinyl chloride (PVC)

**RESPIRATOR:** A NIOSH approved respirator with N95 (dust, fume, mist) filters 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.

When decomposition products exist, acid gas cartridges are also required.

A half facepiece air-purifying respirator may be used in concentrations up to 10X the acceptable exposure level and a full facepiece air-purifying respirator may 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 must be followed whenever workplace conditions warrant use of a respirator.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** liquid

**APPEARANCE:** clear

**COLOR:** colorless to pale yellow

**ODOR:** characteristic bleach odor

**BOILING POINT:** 230 F (110 C)

**FREEZING POINT:** Not available

**DECOMPOSITION POINT:** 230 F (110 C)

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** Not available

**SPECIFIC GRAVITY (water=1):** 1.27

**WATER SOLUBILITY:** 100%

**PH:** 12

**VOLATILITY:** Not available

**ODOR THRESHOLD:** 2 ppm approximate

**EVAPORATION RATE:** Not available

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

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## SECTION 10 STABILITY AND REACTIVITY

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**REACTIVITY:** Stable. May decompose upon heating and exposure to sunlight.

**CONDITIONS TO AVOID:** Avoid heat, flames, sparks and other sources of ignition. Avoid direct sunlight.

**INCOMPATIBILITIES:** most metals, acids, ammonia compounds, oxidizing materials, peroxides, reducing agents

**HAZARDOUS DECOMPOSITION:**

Combustion products: hydrogen chloride, chlorine

Thermal decomposition products: chlorine containing gases

**POLYMERIZATION:** Will not polymerize.

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## SECTION 11 TOXICOLOGICAL INFORMATION

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**SODIUM HYPOCHLORITE (EPA):**

**TOXICITY DATA:** The toxicity and corrosivity of this material is a function of concentration and pH. This material is irritating and may be corrosive to all tissue. Inhalation may cause coughing, choking, irritation and pulmonary edema. Eye contact may be irritating or corrosive with permanent damage (blindness). Skin contact may be irritating and corrosive. Long term skin exposure may result in dermatitis. Ingestion is not a normal route of exposure. Ingestion may cause irritation, corrosion of gastrointestinal tract, pain and vomiting.

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## SECTION 12 ECOLOGICAL INFORMATION

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**ECOTOXICITY DATA:**

**FISH TOXICITY:** This material is believed to be of a moderate order of toxicity based on analogous material.

**FATE AND TRANSPORT:**

**BIODEGRADATION:** This material is inorganic and not subject to biodegradation.

**PERSISTENCE:** This material is believed not to persist in the environment.

**BIOCONCENTRATION:** This material is believed not to bioaccumulate.

**OTHER ECOLOGICAL INFORMATION:** This material may be harmful to aquatic life in low concentrations.

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## SECTION 13 DISPOSAL CONSIDERATIONS

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Reuse or reprocess if possible. Containers should be triple rinsed according to label instructions. Dispose in accordance with all applicable regulations. May be subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.

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## SECTION 14 TRANSPORT INFORMATION

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**U.S. DOT 49 CFR 172.101:**

**PROPER SHIPPING NAME:** Hypochlorite solutions (SODIUM HYPOCHLORITE)

**ID NUMBER:** UN1791

**HAZARD CLASS OR DIVISION:** 8

**PACKING GROUP:** III

**LABELING REQUIREMENTS: 8****DOT HAZARDOUS SUBSTANCE(S):**

Sodium hypochlorite 100 lb(s) (45.4 kg(s))

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:****SHIPPING NAME:** HYPOCHLORITE SOLUTION (SODIUM HYPOCHLORITE)**UN NUMBER:** UN1791**CLASS:** 8**PACKING GROUP/RISK GROUP:** III

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**SECTION 15 REGULATORY INFORMATION**

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**U.S. REGULATIONS:****CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):****SODIUM HYPOCHLORITE:** 100 LBS RQ**SODIUM HYDROXIDE:** 1000 LBS RQ**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):** Not regulated.**SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):**

ACUTE: Yes

CHRONIC: No

FIRE: Yes

REACTIVE: No

SUDDEN RELEASE: No

**SARA TITLE III SECTION 313 (40 CFR 372.65):** Not regulated.**OSHA PROCESS SAFETY (29CFR1910.119):** Not regulated.**OTHER U.S. REGULATIONS:** Federal Insecticide, Fungicide and Rodenticide Act (FIFRA): Registered pesticide (40 CFR 152.10).**STATE REGULATIONS:****California Proposition 65:**

Known to the state of California to cause the following:

**BROMATE**

Cancer (May 31, 2002)

**NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:****REPORTING REQUIREMENT:**

SODIUM HYPOCHLORITE 7681-52-9 13-15%

SODIUM HYDROXIDE 1310-73-2 0-1%

WATER 7732-18-5 70-76%

SODIUM CHLORIDE 7647-14-5 11-14.5%

**RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:**

SODIUM HYPOCHLORITE 7681-52-9 13-15%

SODIUM HYDROXIDE 1310-73-2 0-1%

**SPECIAL HEALTH HAZARD SUBSTANCE LIST:**

SODIUM HYDROXIDE 1310-73-2 0-1%

**PENNSYLVANIA RIGHT TO KNOW:  
REPORTING REQUIREMENT:**

SODIUM HYPOCHLORITE 7681-52-9 13-15%  
WATER 7732-18-5 70-76%  
SODIUM CHLORIDE 7647-14-5 11-14.5%

**HAZARDOUS SUBSTANCE LIST:**

SODIUM HYPOCHLORITE 7681-52-9 13-15%  
SODIUM HYDROXIDE 1310-73-2 0-1%

**ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:**

SODIUM HYPOCHLORITE 7681-52-9 13-15%  
SODIUM HYDROXIDE 1310-73-2 0-1%

**SPECIAL HAZARDOUS SUBSTANCE LIST:**

Not regulated.

**CANADIAN REGULATIONS:**

**WHMIS CLASSIFICATION:** E.

**NATIONAL INVENTORY STATUS:**

**U.S. INVENTORY (TSCA):** All the components of this substance are listed on or are exempt from the inventory.

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

**CANADA INVENTORY (DSL/NDSL):** All components of this product are listed on the DSL.

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**SECTION 16 OTHER INFORMATION**

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