

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**EXPOSURE LIMITS:**

SODIUM HYPOCHLORITE = 0.5 PPM TWA AS CHLORINE, 1 PPM STEL AS CHLORINE (ACGIH),  
1 PPM CEILING LIMIT AS CHLORINE (OSHA)

**ENGINEERING CONTROLS:** NONE REQUIRED. GENERAL ROOM VENTILATION IS TYPICALLY ADEQUATE.

**PERSONAL PROTECTION**

**EYES:** SPLASH PROOF SAFETY GLASSES, SAFETY GOGGLES AND AN EYE WASH STATION.  
**HANDS:** CHEMICAL RESISTANT GLOVES: RUBBER OR NEOPRENE. LONG TYPE IF NEEDED.  
**RESPIRATORY:** IF MISTS/VAPORS ARE NOT CONTROLLED BY VENTILATION, WEAR SUITABLE RESPIRATOR.  
**FEET:** TYPICALLY NOT NEEDED. WEAR BOOTS DURING SPILL & WHEN EXPOSURE IS POSSIBLE.  
**BODY:** IF MAJOR EXPOSURE IS POSSIBLE. WEAR FULL-COVER PROTECTIVE CLOTHING.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR:** YELLOW  
**ODOR :** CHLORINE  
**pH CONCENTRATE:** GREATER THAN 12.0 (BASIC)  
**pH @ 2500 PPM SOLUTION:** N.A.P.  
**pH @ USE DILUTION:** N.A.P.  
**PHYSICAL STATE:** LIQUID  
**SPECIFIC GRAVITY:** 1.210  
**VISCOSITY:** NON-VISCOUS  
**BOILING POINT:** N.A.P.  
**MELTING POINT:** N.A.P.

**FLASH POINT:** N.A.P.  
**UEL:** N.A.P.  
**LEL:** N.A.P.  
**EVAPORATION RATE:** N.A.P.  
**ODOR THRESHOLD:** N.A.P.  
**VAPOR PRESSURE:** N.A.P.  
**VAPOR DENSITY:** N. AP.  
**COEFF. OIL/WATER:** N.A.P.  
**WATER SOLUBILITY:** COMPLETE  
**OTHER:** N.A.P.

**10. STABILITY AND REACTIVITY**

**STABLE:** YES

**CONDITIONS TO AVOID:** AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F.

**MATERIALS TO AVOID:** AVOID MIXING DIRECTLY WITH ANY OTHER CLEANING PRODUCT. AVOID ACIDS, AMMONIA AND VARIOUS METALS (ALUMINUM, ZINC, TIN, BRASS OR BRONZE) WHICH CAN GENERATE FLAMMABLE HYDROGEN GAS. MIX ONLY WITH WATER, UNLESS RTU.

**DECOMPOSITION PRODUCTS:** FIRE OR MIXING WITH INCOMPATIBLE MATERIALS MAY PRODUCE OXIDES OF CARBON AND OTHER TOXIC OR IRRITATING FUMES.

**POSSIBILITY OF HAZARDOUS REACTIONS:** AVOID MIXING DIRECTLY WITH ACIDS.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE EFFECTS:** CORROSIVE. SEE SECTION 2.

**CHRONIC EFFECTS:** NONE KNOWN. NO REPORTABLE CARCINOGENS, MUTAGENS, SENSITIZERS, SYNERGISTIC MATERIALS, TERATOGENS, OR REPRODUCTIVE TOXINS.

**LC50/LD50:** SODIUM HYPOCHLORITE 15%: 5800 MG/KG ORAL-MOUSE LD50

**TARGET ORGANS:** EYES, SKIN, RESPIRATORY SYSTEM.

**OTHER TOXIC EFFECTS:** NONE KNOWN.