MATERIAL SAFETY DATA SHEET

JCI Jones Chemicals, Inc. Sunny Sol® 150

SECTION I - IDENTIFICATION

TRADE NAME: Sunny Sol® 150
CHEMICAL NAME: Sodium Hypochlorite
FORMULA: NaOCl
DOT SHIPPING NAME: Hypochlorite Solutions
DOT HAZARD CLASS: 8
UN/NA NUMBER: UN 1791
DOT LABEL: Corrosive
DOT PLACARD: Corrosive
PACKING GROUP: III
REPORTABLE QUANTITY: Sodium Hypochlorite: 100 Pounds/45.4 Kilograms
CAS NUMBER: 7681-52-9
NFPA DESIGNATION: The NFPA has not rated sodium hypochlorite.

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL	% BY WEIGHT	CAS NO.	OSHA PEL	ACGIH TLV
Sodium Hypochlorite	12.5-15.6	7681-52-9	Not Applicable	Not Applicable
Sodium Hydroxide	0.1-2.0	1310-73-2	2mg/m^3 ceiling	STEL/CEIL(c) 2mg/m^3 ceiling
Inert Ingredients	Balance	Not Applicable	Not Applicable	Not Applicable

CARCINOGENICITY STATUS: NTP - No, IARC - No, OSHA - No.

SECTION III - PHYSICAL DATA

APPEARANCE: Yellow-green liquid
BOILING POINT: 219°F (104°C) for 12.5% NaOCl by wt.
FREEZING POINT: - 11°F (- 24°C) for 12.5% NaOCl by wt.
ODOR: Chlorine
pH: 12.5 - 13.5 s.u. @ 25°C
VISCOSITY (Cs): 2.15 @ 23°C for 12.5% NaOCl by wt.
% VOLATILE BY VOLUME: Variable water plus products of decomposition
SOLUBILITY IN WATER: Complete
SPECIFIC GRAVITY (Water=1): 1.196 @ 20°C for 12.5% NaOCl by wt.
VAPOR DENSITY (AIR=1): Not available

VAPOR PRESSURE (mm Hg): Variable water plus products of decomposition.

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (Test method): Not applicable
AUTO IGNITION TEMPERATURE: Not applicable
FLAMMABLE LIMITS IN AIR (Volume %): Not applicable
EXTINGUISHING MEDIA: Flood with water or carbon dioxide (CO2)
SPECIAL FIRE FIGHTING PROCEDURES: Use National Institute of Occupational Safety & Health (NIOSH) approved respirator with acid type canister or use self-contained breathing apparatus. Unusual fire and explosion hazards: material is a strong oxidizer. Contact with combustibles may initiate or promote combustion. Acid and heat accelerate decomposition. Decomposition products may include chlorine.

SECTION V - HEALTH HAZARD INFORMATION

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
No medical conditions are known to be aggravated by exposure.

ROUTES OF EXPOSURE

- **INHALATION**: Fumes from spills can cause severe irritation and chemical burns to the nose, throat, and lungs. Very little hazard from properly stored solution.
- **SKIN CONTACT**: Severe irritant, reddening of skin, can cause chemical burns to skin.
- **SKIN ABSORPTION**: Same as skin contact.
- **EYE CONTACT**: Severe irritant, corrosive, can severely burn eyes.
- **INGESTION**: Causes irritation of membranes of the mouth, throat, and stomach pain and possible ulceration. LD50 (oral, rat) for 12.5% NaOCl is approximately 5 g/kg body weight.

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE (see Routes of Exposure above)
- **SWALLOWING**: See "ingestion" under routes of exposure.
- **SKIN CONTACT**: severe Irritant, reddening of skin, skin damage, chemical burns.
- **INHALATION**: Fumes from spills are very irritating to mucous membranes.
- **EYE CONTACT**: Extreme irritant, corrosive.

CHRONIC OVEREXPOSURE (see Routes of Exposure above)
- **EYE**: Can cause damage.
- **SKIN**: Can cause damage, chemical burns.

EMERGENCY AND FIRST AID PROCEDURES

IF ON SKIN OR CLOTHING: Take off contaminated clothing; rinse skin immediately with plenty of water for 15-20 minutes; call a poison control center or doctor for treatment advice.

IF IN EYES: 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.

IF SWALLOWED: Call poison control center or doctor immediately 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.

IF INHALED: Move person to fresh air; if person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible; call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION VI - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY
Solutions are fairly stable in concentrations below 10%. Stability decreases with concentration, heat, light, exposure, decrease in pH, and contamination with heavy metals, such as nickel, cobalt, copper, and iron.

INCOMPATIBILITY
Acids, alcohols, amines, ammonia, chlorinated isocyanurates, combustibles, cyanides, detergents, ethers, hydrocarbons, oxidizable materials, reducing agents. Corrosive to most metals .

DECOMPOSITION PRODUCTS
Hypochlorous Acid (HOCl), chlorine, hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend upon pH, temperature and time, are sodium chloride, sodium chlorate and oxygen.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION
Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

IN THE EVENT OF A TRANSPORTATION EMERGENCY, CALL CHEMTREC: (800) 424-9300

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
Cleanup personnel must wear proper protective equipment (See Section VIII). Contain in diked area. Neutralize with sodium bisulfite or ferrous salt solutions. Place neutralized material in DOT specification approved container(s). Flush area with large amounts of water. Comply with all Federal, State and Local reporting

WASTE DISPOSAL
Contact Federal, State, County, and Local environmental regulators for guidance regarding proper disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: Local exhaust is recommended.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

- **RESPIRATORY**: Use National Institute of Occupational Safety and Health (NIOSH) or Mine Safety and Health Administration (MSHA) approved respirator appropriate for this product when permissible exposure limits are exceeded.
- **EYES**: Use chemical goggles and face shield with chin guard.
- **GLOVES**: Use chemical resistant rubber, plastic, or neoprene gloves.
- **OTHER**: Use chemical resistant splash apron and boots. Safety shower and eye wash fountain should be located nearby.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING
DANGER: This product is corrosive and may cause severe skin irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or on clothing. Wear goggles and face shield and chemical resistant gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

PROPER STORAGE AND DISPOSAL REQUIREMENTS
Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water.

Disposal for domestic use: Do not reuse container. Rinse thoroughly before discarding in trash. Disposal for all other uses: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment.

Store in an upright position!!!

OTHER PRECAUTIONS

STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents or other chemicals may release hazardous gases irritating to eyes, lungs and mucous membranes.

SECTION X – REGULATORY STATUS INFORMATION

- This product is listed in the Toxic Substances Control Act (TSCA) Inventory Of Chemical Substances.
- USEPA Pesticide Registration Number: 1744-20001
- Certified in Accordance with ANSI/NSF Standard 60 (Drinking Water Treatment Additives). Maximum Use Level: 80 mg/L
- Manufactured in Accordance with AWWA Standard for Hypochlorites, AWWA B300-04.
- USDA Authorized Uses: 3D, B1, D2, L1, Q4
- SARA Title III Extremely Hazardous Substance: No
- SARA Title III Toxic Chemical: No
- DOT Shipping Description: UN 1791, Hypochlorite Solutions, 8, PG III

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Sodium Hypochlorite (12-15%) Aquatic Toxicity Information

Source: www.pesticideinfo.org

Common Name	Scientific Name	Avg Species LC_{50} (ug/L)	LC_{50} Std Dev	Number of Studies	Avg Species Rating	Outlier Result for Organism Group?
Fish						
Fathead minnow	Pimephales promelas	2,101	2,524	23	Moderately Toxic	

Common Name	Scientific Name	Avg Species LC_{50} (ug/L)	LC_{50} Std Dev	Number of Studies	Avg Species Rating	Outlier Result for Organism Group?
Zooplankton						
Water flea	Ceriodaphnia dubia	52.3	46.8	6	Very Highly Toxic	
Water flea	Daphnia magna	729.0	969.5	3	Highly Toxic	