MATERIAL SAFETY DATA SHEET

Date Issued: 01/27/2003
MSDS No: SHS15B
Date Revised: 02/19/2008
Revision No: 7

DYNACHLOR (E.P.A. REG. NO. 72315-6-12446)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DYNACHLOR (E.P.A. REG. NO. 72315-6-12446)
PRODUCT DESCRIPTION: Hypochlorite Solution
PRODUCT CODE: SHS15B
PRODUCT FORMULATION NAME: SHS15
ACTIVE INGREDIENT(S): Sodium hypochlorite 7-15%

MANUFACTURER

Zee Company, Inc.
4146 South Creek Road
Chattanooga TN 37406
Emergency Contact: James A. Faller
Service Number: (423) 698-1401

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (800) 424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER - CORROSIVE: May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Avoid breathing vapors. Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs, and mucous membranes.

POTENTIAL HEALTH EFFECTS

EYES: Liquid and mists may severely irritate or damage the eyes.

SKIN: Irritation and possible chemical burns

INGESTION: Liquid and mists are extremely corrosive to mouth, throat, mucous membranes, and stomach. Swallowing the liquid burns the tissues, causes severe abdominal pain, delirium, coma, and collapse; swallowing large quantities can cause death.

INHALATION: Inhalation of fumes or mists causes respiratory tract irritation and irritation of mucous membranes. If sodium hypochlorite is mixed with ammonia or other chemicals, evolution of chlorine or hypochlorous acid resusts. These gases can produce pulmonary edema.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Severe irritation and burning

SKIN: Redness and irritation

INGESTION: Severe gastric pain, nausea and/or vomiting

INHALATION: Severe irritation of respiratory system and difficulty in breathing.

CHRONIC EFFECTS: None known

CARCINOGENICITY: Ingredients not listed.

MUTAGENICITY: None known

REPRODUCTIVE TOXICITY

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REPRODUCTIVE EFFECTS: None known

TERATOGENIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED: People with asthma or other lung problems may be more susceptible

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Sodium hypochlorite 7-15%	~ 12.5	7681-52-9
Sodium hydroxide	< 1	1310-73-2

4. FIRST AID MEASURES

EYES: Flush eyes with water for at least 15 minutes and get medical attention if symptoms persist.

SKIN: Rinse skin with water for 15 minutes. If irritation persists, seek medical attention.

INGESTION: Drink milk or gelatin solution. If these are not available, drink 1 or 2 glasses of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

INHALATION: Remove to fresh air. If breathing has not returned to normal within a few minutes, GET MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: None

FLAMMABLE LIMITS: N/A to N/A

EXTINGUISHING MEDIA: This material is not combustible. Use extinguishing media appropriate for surrounding fire.

OTHER CONSIDERATIONS: Use water spray to cool nearby containers and structures exposed to fire.

EXPLOSION HAZARDS: Containers of this material can explode under fire conditions. Oxygen may be liberated upon contact with certain metals. Toxic fumes are liberated by contact with acids or heat. Highly exothermic reactions with organic materials and oxidizable materials may cause fires.

FIRE FIGHTING PROCEDURES: Firefighters should wear full protective gear and self-contained breathing apparatus with full face shield to protect from toxic and corrosive fumes and mists.

HAZARDOUS DECOMPOSITION PRODUCTS: HOCl, chlorine, HCl, sodium chlorate, and oxygen which depend on pH, temperature, and time.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Mop or wipe up and dispose of in DOT-approved waste container.

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LARGE SPILL: Contain by diking with non-combustible absorbent material and carefully neutralize with a 5% sodium bisulfite solution. Keep non-neutralized material out of sewers, storm drains, surface waters, and soil. This product is very toxic to aquatic life.

GENERAL PROCEDURES: Action to take for large spills or leaks: Wear alkali-resistant covering and complete protective equipment including impervious gloves, impervious boots, and a self-contained breathing apparatus in the pressure demand mode or a supplied-air respirator. If the spill or leak is small, a full facepiece air-purifying cartridge respirator equipped with acid gases/mists filters may be satisfactory, in any event, always wear eye protection.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep container tightly closed when not in use. Do not use pressure to empty container. Do not mix this product with other cleaning agents that may liberate chlorine gas vapors (i.e. acidic agents). Always obey hazard warnings and handle empty containers as if they were full. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

HANDLING: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing.

STORAGE: Store in a cool, dry, well-ventilated place away from incompatible materials. Do not store near acids, oxidizable materials or organics. Do not store directly on wooden floors. Wooden pallets may be used as long as precautions are taken to prevent spillage or leakage onto pallets.

STORAGE TEMPERATURE: Minimum to (85°F) Maximum

SHELF LIFE: This product degrades with age; use it within one or two months after receipt.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		**ppm**	**mg/m³**	**ppm**	**mg/m³**
Sodium hypochlorite 7-15%	**TWA**	1.5 mg/m3 [1]	[1]	1.5 mg/m3	
	STEL	3 mg/m3			
Sodium hydroxide	**TWA**	2 mg/m3		2 mg/m3	
OSHA TABLE COMMENTS: **1**. OSHA STEL as chlorine is 2.9 mg/m3					

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical goggles or a faceshield should be used unless a full facepiece respirator is worn. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury.

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SKIN: Wear impermeable gloves such as neoprene or rubber.

RESPIRATORY: Respirator protection not normally needed since the volatility and toxicity are low. If vapors, mists, or aerosols are generated above OSHA TLV values, wear a NIOSH/MSHA-approved respirator equiped with chemical cartridges for protection against chlorine gas. A dust/mist prefilter should also be used.

PROTECTIVE CLOTHING: Wear long sleeves and water-proof apron to prevent excessive skin contact. Remove and wash contaminated clothing before wearing again.

OTHER USE PRECAUTIONS: Local exhaust ventilation is recommended if vapors, mists or aerosols are generated in the use area. Otherwise use general exhaust.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Chlorine or bleach

APPEARANCE: Clear liquid

COLOR: Light yellowish green

pH: ~ 10.5
Notes: in a 1% Solution

VAPOR PRESSURE: ~ 17.5 mmHg

VAPOR DENSITY: Not Established

BOILING POINT: > 100°C (212°F)

MELTING POINT: (9.4°F) to (10.4°F)

FLASHPOINT AND METHOD: None

SOLUBILITY IN WATER: Completely Miscible

EVAPORATION RATE: ~ 1 (Water = 1)

SPECIFIC GRAVITY: ~ 1.100 to 1.3 g/ml

WEIGHT PER VOLUME: 10 lb/gal

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals such as nickle, cobalt, copper and iron.

POLYMERIZATION: Hazardous polymerization will not occur.

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CONDITIONS TO AVOID: Do not mix this product with acids.

INCOMPATIBLE MATERIALS: Ether, ammonia, acids, reducing agents, oxidizable materials, combustible materials (such as wood, cloth), organic materials, heavy materials such as iron and copper and their alloys, dirt, detergents. magnesium, aluminum, tin, manganese, zinc, and nitro compounds.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY

IARC: Ingredients not listed.

NTP: Ingredients not listed.

OSHA: Ingredients not listed.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY (ACUTE): Aquatic LC50 - approximately 0.6 mg/l (bluegill) and approximately 1 mg/l (daphnia, 48 hours)

GENERAL COMMENTS: This product is toxic to fish. Do not discharge into lakes, streams, ponds, or public waterways unless in accordance with NPDES permit. For guidelines contact the regional office of the U.S. Environmental Protection Agency.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with Federal, State and local regulations.

EMPTY CONTAINER: Triple rinse with water then offer for reconditioning or disposal.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: HYPOCHLORITE SOLUTIONS

TECHNICAL NAME: HYPOCHLORITE SOLUTIONS

PRIMARY HAZARD CLASS/DIVISION: 8

UN/NA NUMBER: UN1791

PACKING GROUP: III

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 100 pounds

PLACARDS: Corrosive

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

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311/312 HAZARD CATEGORIES: Reporting required for inventory above TPQ

ACUTE: Yes

313 REPORTABLE INGREDIENTS: None

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: Reporting is required for releases of this material in excess of the threshold quantity.

THRESHOLD QUANTITY: 100 pounds

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Same as section 304

REPORTABLE SPILL QUANTITY: 100 lbs

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: INGREDIENTS LISTED

16. OTHER INFORMATION

APPROVED BY: James A. Faller **TITLE:** Director of Operations

PREPARED BY: Walter Brown

INFORMATION CONTACT: James Faller

REVISION SUMMARY: Revision #: 7 This MSDS replaces the June 12, 2006 MSDS. Any changes in information are as follows: In Section 12 Aquatic Toxicity (Acute)

HMIS RATING

HEALTH:	**2**
FLAMMABILITY:	**0**
PHYSICAL HAZARD:	**1**
PERSONAL PROTECTION:	**B**

GENERAL STATEMENTS: The information contained herein is believed to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that information is current, applicable, and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.