

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/22/2023

Reviewed on 03/22/2023

1 Identification

- **Product identifier** Hypochlorite Solution
- **Trade name:** **DYNACHLOR (EPA Reg. 12446-1)**
- **Article number:** SHS15A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium hypochlorite, solution
- **Hazard statements**
Causes severe skin burns and eye damage.
- **Precautionary statements**
Keep away from acids.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.

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Protect from sunlight. Store in a well-ventilated place.

Store away from acids.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 1

- **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = 2

FIRE 0 Fire = 0

REACTIVITY 1 Reactivity = 1

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Description**

7681-52-9 sodium hypochlorite, solution

- **EC number:** 231-668-3

- **Index number:** 017-011-00-1

- **Chemical characterization:** Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7681-52-9	sodium hypochlorite, solution	10-15%
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4 First-aid measures

- **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:** Remove to fresh air. If symptoms persist consult a doctor.

- **After skin contact:**

Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.

Immediately rinse with water.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.

- **After swallowing:**

Immediately contact a doctor or Poison Control Center.

Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter surface or ground water.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

All components have the value 2 mg/m³.

- **PAC-2:**

All components have the value 290 mg/m³.

- **PAC-3:**

All components have the value 1,800 mg/m³.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Keep away from heat and direct sunlight.
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep this and all chemicals out of the reach of children.
Store in a cool, dry, well ventilated area.
Do not store in direct sunlight.
- **Information about storage in one common storage facility:**
Store away from oxidizers and acidic materials.
Do not store together with acids.
- **Further information about storage conditions:**
Recommended maximum storage temperature is 85 F.
Shelf life: 6 months at ideal storage conditions
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

7681-52-9 sodium hypochlorite, solution	
WEEL	Short-term value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

· Body protection: Apron

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Yellow
Odor:	Like chlorine
Odor threshold:	Not determined.

· pH-value at 20 °C (68 °F): >12

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure: Not determined.

· Density at 20 °C (68 °F): 1.2 g/cm³ (10.014 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
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· **Other information**

No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals such as nickle, cobalt, copper, and iron.
- **Thermal decomposition / conditions to be avoided:** Stable at ambient temperature.
- **Possibility of hazardous reactions**
No dangerous reactions known.
Do not mix with bleach or other chlorinated products – will cause chlorine gas.
- **Conditions to avoid** Do not mix with acids.
- **Incompatible materials:**
Reducing Agents
Acids, ammonia, reducing agents, combustible materials (such as wood, cloth), organic materials, soft metals, iron, and oxidizable materials.
- **Hazardous decomposition products:** Chlorine

11 Toxicological information

- **Information on toxicological effects**
Occupational exposure to the substance or mixture may cause adverse effects.
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Sodium hypochlorite 5 - 17% (CAS Mixture) - Dermal LD50 Rabbit >2g/kg; Oral LD50 Rat 3-5 g/kg
- **Primary irritant effect:**
Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
- **on the skin:** Strong corrosive effect on the skin
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
 - Sodium hypochlorite solution
 - Crustacea, LC50, Daphnia: 1 mg/L
 - Fish, LC50, 48 hour, Bluegill (Lepomis macrochirus): 0.6 mg/L
 - a. Aquatic Toxicity Freshwater fish, 96 hr LC50 = > 100 mg/l (estimated)
 - Daphnia magna, 48 hr EC50 = > 100 mg/l (estimated)
 - Acute aquatic toxicity will result from oxygen depletion caused by sulfite ingredient. Prevent spills from entering natural waterways and sewer systems.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 2 (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 - Danger to drinking water if even small quantities leak into the ground.
 - Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 - Dispose of in accordance with federal, state, and local regulations.
 - Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer.
 - Must not be disposed of together with household garbage.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------|------------------------|
| · UN-Number | |
| · DOT, IMDG, IATA | UN1791 |
| · UN proper shipping name | |
| · DOT | Hypochlorite solutions |
| · IMDG, IATA | HYPOCHLORITE SOLUTION |

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· Transport hazard class(es)

· DOT



· Class 8 Corrosive substances
 · Label 8
 · Class 8 Corrosive substances
 · Label 8

· IMDG, IATA



· Class 8 Corrosive substances
 · Label 8

· Packing group

· DOT, IMDG, IATA III

· Environmental hazards:

· Marine pollutant: No

· Special precautions for user Warning: Corrosive substances

· Hazard identification number (Kemler code): 80

· EMS Number: F-A,S-B

· Segregation groups Hypochlorites

· Stowage Category B

· Segregation Code SG20 Stow "away from" SGG1-acids

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information: 49 CFR §173.154 (Exemption): This product can ship as a "Limited Quantity" if packaged in containers <1.3 gallons.

· DOT

· Quantity limitations On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L

· IMDG

· Limited quantities (LQ) 1L

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1791 HYPOCHLORITE SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture

- Sara

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labeling:**

sodium hypochlorite, solution

- **Hazard statements**

Causes severe skin burns and eye damage.

- **Precautionary statements**

If on skin: Wash with plenty of soap and water.

Keep out of reach of children.

Keep away from acids.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

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Wear protective gloves/protective clothing/eye protection/face protection.
 If swallowed: Rinse mouth. Do NOT induce vomiting.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a poison center/doctor.
 Wash contaminated clothing before reuse.
 Protect from sunlight. Store in a well-ventilated place.
 Store away from acids.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Jim Faller/Ben Pesigan
- **Date of preparation / last revision** 03/22/2023 / 26
- **Abbreviations and acronyms:**
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
- *** Data compared to the previous version altered.**

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