# Safety Data Sheet

according to WHMIS 2015



## Bleach 3

## SECTION 1: Identification

**Product name: Bleach 3**

**Other means of identification:** Hypochlor-12, Bleach, Clorox, Hypochlorous acid-sodium salt, Javel water, Liquid Bleach, NaOCl, Soda Bleach, Sodium Chloride Oxide, Sodium Oxychloride, Javex.

**Recommended use and restrictions on use**: to remove tough stains and deodorize fabrics.

**Supplier Details:**

YXELABS Incorporated
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Saskatoon, Saskatchewan
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**Emergency telephone number:** Call CANUTEC's 24-hr Number 613-996-6666

## SECTION 2: Hazard Identification

**Classification of the substance or mixture:**

| | |
|---|---|
|  **Corrosion** | • Corrosive to metals (Category 1)<br>• Skin corrosion/irritation – Skin corrosion (Category 1B)<br>• Serious eye damage/eye irritation - Serious eye damage (Category 1) |

**Signal word:** Danger

**Hazard statements:**

May be corrosive to metals
Causes severe skin burns and eye damage

**Precautionary statements:**

Do not breathe mist, vapors or spray.
Wear protective gloves, protective clothing, eye protection, and face protection.
Wash skin thoroughly after handling
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin.
Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.
Collect spillage. Absorb spillage to prevent material damage.
Keep only in original container.
Store locked up.
Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

**Other hazards which do not result in classification:** Not identified

## SECTION 3: Composition/Information on Ingredients

| Chemical Name | CAS No. | Concentration (% wt/wt) |
|---|---|---|
| Sodium Hypochlorite | 7681-52-9 | 12 |

## SECTION 4: First Aid Measures

**Description of first aid measures:**

**After inhalation:** Can release corrosive chlorine gas. Move to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort of irritation persists. If breathing is difficult, give oxygen.

**After skin contact: Take off contaminated clothing and shoes immediately.** Wash affected area with soap and water. Seek medical attention if irritation, discomfort persist.

**After eye contact:** Protect unexposed eye. Rinse/flush exposed eye/s gently using water for 15-20 minutes. Remove contact lens/es if able to do so during rinsing. Immediately get medical assistance.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink slips of water. Seek medical attention if irritation, discomfort or vomiting persists.

**Most important symptoms and effects, both acute and delayed:** Irritation, nausea, headache, shortness of breath.

## SECTION 5: Firefighting Measures

**Extinguishing media**

**Suitable extinguishing agents:** Sodium hypochlorite solutions do not burn. Extinguish fire using extinguishing agents suitable for the surrounding fire and not contraindicated for use with sodium hypochlorite. Cool exposed containers with water.

**For safety reasons, unsuitable extinguishing agents:** DO NOT use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents), since an explosive compound can be formed.

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**Special hazards arising from the substance or mixture**: Sodium hypochlorite decomposes when heated, giving off corrosive chlorine and hydrogen chloride. Solutions decompose when exposed to sunlight, giving off oxygen gas. However, the amount of oxygen produced is not sufficient to cause combustion. Explosive decomposition may occur under fire conditions and closed containers may rupture violently due to a rapid decomposition, if exposed to fire or excessive heat for a sufficient period of time.

**Advice for firefighters:**

**Protective equipment:** Wear NIOSH-approved self-contained breathing apparatus and protective clothing. The decomposition products of sodium hypochlorite, such as chlorine and hydrogen chloride are extremely hazardous to health. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective equipment (Bunker Gear) will not provide adequate protection.

**Additional information (precautions):** Move product containers away from fire or keep cool with water spray as protective measure, where feasible.

## SECTION 6: Accidental Release Measures

**Personal Precautions / Protective Equipment / Emergency Procedures:** Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.

**Environmental Precautions:** Prevent material from entering sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.

**Methods and material for containment and cleaning up:** SMALL SPILLS: Clean up spill with non-reactive absorbent and place in suitable, covered, labelled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product. Small spills of sodium hypochlorite solutions can be broken down by covering it with a reducing agent such as sodium thiosulfate, sodium metabisulfite, or a ferrous salt. With the sulfite or ferrous salt, add some dilute (2 M) sulfuric acid to speed up the reaction. Transfer the mixture into large containers of water and neutralize with soda ash (sodium carbonate). LARGE SPILLS: Contact fire and emergency services and supplier for advice.

## SECTION 7: Handling and Storage

**Precautions for safe handling:** This material is a CORROSIVE liquid. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid generating mists. Prevent the release of mists into the workplace air. Inspect containers for damage or leaks before handling. Label containers. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Never return contaminated material to its original container. Have suitable emergency equipment for fires, spills and leaks readily available.

**Conditions for safe storage:** Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Strong solutions (greater than 10% available chlorine) may slowly give off chlorine during storage, especially when warm (above 18°C). Vent caps may be required to prevent a build-up of pressure that could cause containers to burst. Always store in original labelled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible.

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**Incompatibilites:** Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide
solution.

## SECTION 8: Exposure Controls/Personal Protection

**Control Parameters:**

| Component | Regulation | Type of Listing | Value |
|---|---|---|---|
| Sodium hypochlorite | AIHA | WEEL-STEL | 2 mg/mm$^3$ (15 min) |
| Chlorine | ACGIH | TLV-TWA | 0.5 ppm |

**Appropriate Engineering controls:** Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems. Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

**Respiratory protection:** No specific guidelines are available. A NIOSH-approved respirator suitable for chlorine is recommended. Where a higher level of protection is required, use a self-contained breathing apparatus.

**Protection of skin:** Gloves resistance to breakthrough longer than 8 hours (butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyethylene, polyvinyl chloride. Recommendations are NOT valid for very thin natural rubber, neoprene, nitrile and PVC gloves (0.3 mm or less). Resistance of specific materials can vary from product to product. Breakthrough times are obtained under conditions of continuous contact, generally at room temperature. Evaluate resistance under conditions of use and maintain clothing carefully. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.

**Eye protection:** Safety glasses or chemical goggles is to be worn at all times when product is handled.

**General hygienic measures:** Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and Chemical Properties

| | | | |
|---|---|---|---|
| **Appearance:** | Clear greenish-yellow liquid | **Vapor pressure:** | 14 mmHg @ 20°C |
| **Odor:** | Strong chlorine odor | **Vapor density:** | > 1 |
| **Odor threshold:** | Not available | **Relative density/Specific gravity:** | 1.1-1.2 |
| **pH - value:** | 11.5-13.0 | **Solubilities:** | Soluble in water |
| **Melting/Freezing point:** | -25 °C (for 12% solution) | **Partition coefficient (n-octanol / water):** | Not available |

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| | | | |
|---|---|---|---|
| **Boiling point/Boiling range:** | Slowly decomposes above 40 °C | **Auto/Self-ignition temperature:** | Not applicable |
| **Flash point:** | Not applicable | **Decomposition temperature:** | Slowly decomposes at 40 °C |
| **Evaporation rate:** | Not available | **Viscosity:** | Not applicable |
| **Flammability:** | Not applicable | **Molecular formula:** | NaOCl (Sodium hypochlorite) |
| **Flammability limit lower:**<br>**Flammability limit upper:** | Not applicable<br>Not applicable | **Molecular weight:** | 74.44 g/mol (Sodium hypochlorite) |
| **Explosive Properties:** Pressure buildup in containers could result in an explosion when heated or in contact with acidic fumes. Vigorous reaction with oxidizable organic materials may result in a fire. | | | |

## SECTION 10: Stability and Reactivity

**Reactivity:** Nonreactive under normal conditions.

**Chemical stability:** Sodium hypochlorite solutions decompose slowly at normal temperatures releasing low concentrations of corrosive chlorine gas. Decomposition is influenced by temperature, pH, exposure to light, concentration, ionic strength, and presence of metals.

**Possible hazardous reactions:** None under normal processing.

**Conditions to avoid:** Heat, sunlight, acidic conditions, the presence of metals and other impurities.

**Incompatible materials:** Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide solution.

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## SECTION 11: Toxicological Information

**Hazardous decomposition products:** Hydrogen chloride gas. Thermal decomposition can lead to release of irritating gases and vapors.

| **Component** | **Acute Toxicity** | **Corrosion Irritation** | | **Sensitization** |
|---|---|---|---|---|
| | | **Eye** | **Skin** | |
| Sodium Hypochlorite | No additional information | Corrosive | Causes burns | No information available |

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| Component | Single Target Organ Toxicity (STOT) | Carcinogen | Mutagen | Reproductive Toxicity |
|---|---|---|---|---|
| Sodium Hypochlorite | No information available | No classified | No information available | No information available |

| Sodium Hypochlorite (20%) | |
|---|---|
| **LD 50 oral rat** | 44.5 g/kg |
| **LD 50 dermal rabbit** | > 50 g/kg |
| **Inhalation LC50 rat** | > 26.25 g/m$^3$ (4 hrs) |
| **IARC Group** | 3 |

## SECTION 12: Ecological Information

**Ecotoxicity:**

| Sodium Hypochlorite (PURE SUBSTANCE) | |
|---|---|
| **LC50 fishes 1** | 0.07 mg/l (48 h; Salmo gairdneri) |
| **LC50 Daphnia 1** | 0.032 mg/l (48 h; Daphnia and other Aquatic Invertibrates) |
| **EC50 Algae** | 46 mg/l (96 h; Red Algae) |

**Persistence and degradability:** Readily degradable on the environment.

**Bioaccumulative potential:** Not bioaccumulative.

**Mobility in soil:** -1.87 (water)

**Other information:** Not available

## SECTION 13: Disposal Considerations

**Waste disposal recommendations:** Dispose in a safe manner in accordance with local/national regulations including the Canadian Environmental Protection Act.

## SECTION 14: Transport Information

**UN Number:** 1791
**UN proper shipping name:** Hypochlorite Solution
**Transport hazard class:** 8 – Corrosive Material
**Packing group:** III
**Environmental hazard:** Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.

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## SECTION 15: Regulatory Information

**United States**

| **Sodium Hypochlorite** | |
|---|---|
| **SARA Section 311/312 Hazard Classes** | Acute |
| **TSCA** | Listed |

**Canada**

| **Sodium Hypochlorite** | |
|---|---|
| **Domestic Substances List (DSL)** | Listed |
| **Canadian NPRI Ingredient Disclosure List (limit 1%)** | 7681-52-9 Sodium Hypochlorite |

## SECTION 16: Other Information

YXELABS Incorporated provides the information contained herein in good faith but makes no representation as to its completeness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.
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**Abbreviations and acronyms:**
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CAS: Chemical Abstracts Service
EPA: Environmental Protection Agency
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IARC: International Agency for Research on Cancer
NIOSH/MSHA: National Institute for Occupational Safety and Health/Mine Safety and Health Administration
NPRI: National Pollutant Release Inventory
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendments and Reauthorization Act
TDG: Transportation of Dangerous Goods
TSCA: Toxic Substances Control Act
WHMIS: Workplace Hazardous Materials Information System

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