

## 1. Identification

<b>Product identifier</b>	<b>Sodium Hypochlorite, 5-15% Solution</b>	
<b>Other means of identification</b>	None.	
<b>Recommended use</b>	Cleaner	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	PVS Benson	
<b>Address</b>	1012 Gore Road Freelton, ON L0R1K0 Canada	
<b>Telephone</b>	1-800-265-0014	
<b>e-mail</b>	bensoncs@pvschemicals.com	
<b>Emergency phone number</b>	24 hours/7 days:	1-313-921-1200
<b>Supplier</b>	See above.	

## 2. Hazard identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May be corrosive to metals. Causes serious eye damage.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep only in original packaging. Do not breathe mist or vapour. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection.
<b>Response</b>	Absorb spillage to prevent material-damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. Specific treatment (see information on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	Store in a corrosion resistant container with a resistant inner liner. Store locked up.
<b>Disposal</b>	Dispose of container in accordance with local, regional, national and international regulations.
<b>Other hazards</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium hypochlorite		7681-52-9	5-15
Sodium hydroxide		1310-73-2	3

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Composition comments**      The concentration ranges are provided due to batch-to-batch variability.

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#### 4. First-aid measures

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<b>Inhalation</b>	IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor.
<b>Skin contact</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Specific treatment (see information on this label). Immediately call a POISON CENTRE or doctor.
<b>Eye contact</b>	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 CENTRE or doctor.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

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#### 5. Fire-fighting measures

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<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Firefighters should wear a self-contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of sodium. Hydrogen chloride. Chlorine gas. Oxygen.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self-contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

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#### 6. Accidental release measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop leak if you can do so without risk. Use water spray to reduce vapours or divert vapour cloud drift. Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.

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#### 7. Handling and storage

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<b>Precautions for safe handling</b>	DANGER -- CORROSIVE Use only with adequate ventilation. Do not breathe mist or vapour. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Keep container tightly closed. Wear appropriate personal protective equipment when handling this product. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Do not freeze. Store in a tightly closed container in a cool, dry, well ventilated and dark place away from incompatible materials. Keep out of reach of children.

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## 8. Exposure controls/Personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

#### Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Neoprene, Butyl rubber., PVC, Viton™. or Saranex® Gloves. Confirm with a reputable supplier first.

##### Other

Wear appropriate chemical resistant clothing. Neoprene. Butyl rubber. PVC. Viton™. or Saranex® boots and protective suit As required by employer code.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

#### Thermal hazards

Not applicable.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

Appearance	Clear
Physical state	Liquid.

<b>Form</b>	Liquid
<b>Colour</b>	Yellow - Yellowish green
<b>Odour</b>	Pungent
<b>Odour threshold</b>	Not available.
<b>pH</b>	12 - 14 @25°C
<b>Melting point/freezing point</b>	-27.22 °C (-17 °F)
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable
<b>Flammability limit - upper (%)</b>	Not applicable
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit – upper (%)</b>	Not available.
<b>Vapour pressure</b>	12 mmHg @20°C
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (Water)</b>	Completely miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

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## 10. Stability and reactivity

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<b>Reactivity</b>	Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials. Do not mix with other chemicals. High heat, sunlight and ultra-violet light.
<b>Incompatible materials</b>	Strong acids. Strong oxidising agents. Metals. Nitrogen compounds. Iron Copper. Nickel. organic materials
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of sodium. Hydrogen chloride. Chlorine gas. Oxygen. Decomposition rate increases as it is heated

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## 11. Toxicological information

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### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns. May cause stomach distress, nausea or vomiting.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Causes burns.

Components	Species	Test results
Sodium hydroxide (CAS 1310-73-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rabbit	325 mg/kg, ECHA
Sodium hypochlorite (CAS 7681-52-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 20000 mg/kg, ECHA > 10000 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Rat	> 10.5 mg/L, 1 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	5800 mg/kg
	Rat	8910 mg/kg, ECHA 1100 mg/kg, ECHA 5.2 %, ECHA
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitisation</b>		
<b>Canada - Alberta OELs: Irritant</b>		
Sodium hydroxide (CAS 1310-73-2)		Irritant
<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.	
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.	
<b>Germ cell mutagenicity</b>	Non-hazardous by WHMIS criteria.	
<b>Carcinogenicity</b>	Non-hazardous by WHMIS criteria. See below.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Sodium hypochlorite (CAS 7681-52-9)		Volume 52 - 3 Not classifiable as to carcinogenicity to humans.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	
<b>Further information</b>	Not available.	

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## 12. Ecological information

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**Ecotoxicity** See below

**Ecotoxicological data**

Components	Species	Test results
Sodium hydroxide (CAS 1310-73-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 34.59 - 47.13 mg/L, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis) 125 mg/L, 96 hours
Sodium hypochlorite (CAS 7681-52-9)		
Crustacea	EC50	Daphnia 2.1 mg/L, 48 Hours
<b>Aquatic</b>		
Fish	LC50	Chinook salmon (Oncorhynchus tshawytscha) 0.038 - 0.065 mg/L, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.	
<b>Bioaccumulative potential</b>	No data available.	
<b>Mobility in soil</b>	No data available.	
<b>Mobility in general</b>	Not available.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

**13. Disposal considerations**

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Review federal, provincial, and local government requirements prior to disposal.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

<b>General</b>	Canada: TDG Proof of Classification: Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.
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**Transportation of Dangerous Goods (TDG - Canada)****Basic shipping requirements:**

<b>UN number</b>	UN1791
<b>Proper shipping name</b>	HYPOCHLORITE SOLUTION
<b>Hazard class</b>	8
<b>Packing group</b>	III

TDG

**15. Regulatory information**

<b>Canadian federal regulations</b>	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
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**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS status**                      Controlled**International regulations****Inventory status**

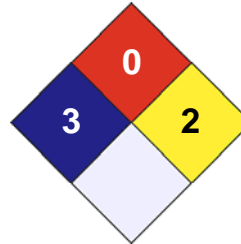
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

<b>HEALTH</b>	/ 3
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	2
<b>PERSONAL PROTECTION</b>	X



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**Other information**                            For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Disclaimer**                                    Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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