

**SAFETY DATA SHEET**

Revision Date: 08/29/2022

Print Date: 10/31/2022

SDS Number: 000000190384

CSW 20

Version: 2.1

35725

**SECTION 1. IDENTIFICATION****Product identifier**

Trade name : CSW 20

**Recommended use of the chemical and restrictions on use**

Use of the Substance/Mixture : Biocide

**Biocides**

PCPA Reg. # 17076

**Details of the supplier of the safety data sheet**

Solenis Canada ULC  
942 Brant St.  
Burlington, ON L7R 3X8  
Canada

EHSProductSafetyTeam@solenis.com  
Solenis Canada ULC

**Emergency telephone number**

1-844-SOLENIS (844-765-3647)

**Product Information**

Contact your local Solenis representative

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the Hazardous Products Regulations**

Corrosive to metals : Category 1

Skin corrosion : Category 1B

Serious eye damage : Category 1

**GHS label elements**Hazard pictograms : 

Signal word : Danger

Hazard statements : H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.Precautionary statements : **Prevention:**  
P234 Keep only in original packaging.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 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.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
SODIUM HYPOCHLORITE	7681-52-9	>= 10 - < 15
sodium hydroxide	1310-73-2	>= 1.5 - < 5

Actual concentration or concentration range is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- |                |  |
|----------------|--|
| General advice | : Move out of dangerous area.<br>Consult a physician.<br>Show this safety data sheet to the doctor in attendance.<br>Do not leave the victim unattended.                     |
| If inhaled     | : Move to fresh air.<br>If breathed in, move person into fresh air.<br>Keep patient warm and at rest.<br>If unconscious, place in recovery position and seek medical advice. |

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If symptoms persist, call a physician.

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|---|--|
| In case of skin contact                                     | : If on skin, rinse well with water.<br>Wash contaminated clothing before re-use.  |
| In case of eye contact                                      | : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Continue rinsing eyes during transport to hospital.<br>Remove contact lenses.<br>Protect unharmed eye.  |
| If swallowed  | : Get medical attention immediately.<br>Do NOT induce vomiting.<br>Rinse mouth with water.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.   |
| Most important symptoms and effects, both acute and delayed | : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:<br>stomach or intestinal upset (nausea, vomiting, diarrhea)<br>irritation (nose, throat, airways)<br>Cough<br>discomfort in the chest<br>hair loss<br>lung edema (fluid buildup in the lung tissue)<br>Difficulty in breathing<br>Causes serious eye damage.<br>Causes severe burns. |
| Notes to physician  | : No hazards which require special first aid measures.   |

**SECTION 5. FIREFIGHTING MEASURES**

- |                                      |   |
|--------------------------------------|---|
| Suitable extinguishing media         | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Water spray<br>Foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical |
| Unsuitable extinguishing media       | : High volume water jet   |
| Specific hazards during firefighting | : Do not allow run-off from fire fighting to enter drains or water courses.   |
| Hazardous combustion products        | : Chlorine<br>hydrogen chloride<br>Sodium oxides<br>corrosive vapors<br>toxic fumes   |

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- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations.
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

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**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust. When diluting, always add the product to water. Never add water to the product. Container hazardous when empty. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sodium hydroxide	1310-73-2	(c)	2 mg/m <sup>3</sup>	CA AB OEL
		C	2 mg/m <sup>3</sup>	CA BC OEL
		C	2 mg/m <sup>3</sup>	CA QC OEL

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

## Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection** : Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.  
Maintain eye wash station in immediate work area.

**Skin and body protection** : Wear as appropriate:  
Impervious clothing  
Chemical resistant apron  
Safety shoes  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Wear resistant gloves (consult your safety equipment supplier).  
Discard gloves that show tears, pinholes, or signs of wear.

**Hygiene measures** : Wash hands before breaks and at the end of workday.  
When using do not eat or drink.  
Ensure that eyewash stations and safety showers are close to the workstation location.  
When using do not smoke.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

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Colour	:	yellow
Odour	:	slight chlorine
Odour Threshold	:	No data available
pH	:	13.5
Melting point/freezing point	:	-24 °C
Boiling point/boiling range	:	100 °C Calculated Phase Transition Liquid/Gas
Flash point	:	Not applicable
Evaporation rate	:	> 1 Ethyl Ether
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	23.33 hPa Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	1.192 (68.00 °F)
Density	:	1.192 g/cm3 (68 °F)
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	2.15 mPa.s ( 23 °C)
Viscosity, kinematic	:	No data available

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Oxidizing properties : No data available

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat  
Do not allow evaporation to dryness.  
Exposure to sunlight.  
Exposure to light.Incompatible materials : Acids  
Alcohols  
Ammonia  
Combustible material  
ethers  
halogenated hydrocarbons  
Hydrocarbons  
isocyanates  
Metals  
Organic materials  
organic nitro compounds  
oxidizable substances  
Reducing agents  
Strong oxidizing agentsHazardous decomposition products : acid vapors  
Chlorine  
Hydrogen chloride gas  
Oxygen  
Sodium oxides  
corrosive vapors  
toxic fumes

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Components:****SODIUM HYPOCHLORITE:**

Acute oral toxicity : LD50 (Rat): &gt; 5 g/kg

Acute dermal toxicity : LD50 (Rabbit, male and female): &gt; 20,000 mg/kg

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**sodium hydroxide:**

Acute oral toxicity : LDLo (Rabbit): 500 mg/kg

**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Result : Causes burns.

Remarks : Causes severe skin burns and eye damage.  
The feeling of irritation or pain may be delayed.**Components:****SODIUM HYPOCHLORITE:**

Result : Corrosive to skin

**sodium hydroxide:**

Result : Causes severe burns.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Result : Causes burns.

Remarks : May cause irreversible eye damage.

**Components:****SODIUM HYPOCHLORITE:**

Result : Corrosive to eyes

**sodium hydroxide:**

Result : Corrosive to eyes

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

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**Components:****SODIUM HYPOCHLORITE:**

- Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: without metabolic activation  
Result: negative
- Test Type: comet assay  
Test system: Human lymphocytes  
Metabolic activation: without metabolic activation  
Result: positive
- Genotoxicity in vivo : Test Type: chromosome aberration assay  
Species: Mouse (male)  
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**Components:****SODIUM HYPOCHLORITE:**

- Exposure routes : Inhalation  
Target Organs : Respiratory Tract  
Assessment : May cause respiratory irritation.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Further information****Product:**

- Remarks : No data available

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): ca. 0.6 mg/l  
Exposure time: 96 h  
Test Type: static test

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LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00283 mg/l  
Exposure time: 6 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Daphnia magna (Water flea)): ca. 1.0 mg/l  
Exposure time: 48 h  
Test Type: static test

**Components:****SODIUM HYPOCHLORITE:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.05 - 0.071 mg/l  
Exposure time: 96 h  
Method: Flow through  
Remarks: Mortality

LC50 (Pimephales promelas (fathead minnow)): 0.06 - 0.11 mg/l  
Exposure time: 96 h  
Method: Flow through  
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Daphnia magna (Water flea)): 0.045 - 0.068 mg/l  
Exposure time: 48 h  
Method: Flow through  
Remarks: Mortality

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 1

**sodium hydroxide:**

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l  
Exposure time: 96 h  
Method: Static  
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 34.59 - 47.13 mg/l  
Exposure time: 48 h  
Remarks: Intoxication

**Persistence and degradability****Components:****SODIUM HYPOCHLORITE:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

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**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Additional ecological information

- : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
- Very toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- |                        |  |
|------------------------|--|
| Waste from residues    | <ul style="list-style-type: none"><li>: The product should not be allowed to enter drains, water courses or the soil.</li><li>Do not contaminate ponds, waterways or ditches with chemical or used container.</li><li>Send to a licensed waste management company.</li></ul> |
|                        | <p>Dispose of in accordance with all applicable local, state and federal regulations.</p>  |
| Contaminated packaging | <ul style="list-style-type: none"><li>: Empty remaining contents.</li><li>Dispose of as unused product.</li><li>Empty containers should be taken to an approved waste handling site for recycling or disposal.</li><li>Do not re-use empty containers.</li></ul>             |

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

- |  |                         |
|--|-------------------------|
| UN number                                | : UN 1791               |
| Proper shipping name                     | : Hypochlorite solution |
| Class                                    | : 8                     |
| Packing group                            | : II                    |
| Packing instruction (cargo aircraft)     | : 855                   |
| Packing instruction (passenger aircraft) | : 851                   |
| Marine pollutant                         | : yes                   |

**IMDG-Code**

- |           |           |
|-----------|-----------|
| UN number | : UN 1791 |
|-----------|-----------|

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Proper shipping name	:	HYPOCHLORITE SOLUTION
Class	:	8
Packing group	:	II
EmS Code	:	F-A, S-B
Marine pollutant	:	yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****TDG**

UN number	:	UN 1791
Proper shipping name	:	HYPOCHLORITE SOLUTION
Class	:	8
Packing group	:	II
ERG Code	:	154
Marine pollutant	:	no

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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**SECTION 15. REGULATORY INFORMATION****The components of this product are reported in the following inventories:**

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIOC	:	On the inventory, or in compliance with the inventory

**Canadian lists**

No substances are subject to a Significant New Activity Notification.

**Biocides**

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Read the label, authorised under the Pest Control Products Act, prior to using or handling the pest control product. This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:, Warning Corrosive symbol, WARNING!, Corrosive., There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

**SECTION 16. OTHER INFORMATION**
**Further information**

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**Full text of other abbreviations**

CA AB OEL	: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	: Canada. British Columbia OEL
CA QC OEL	: Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
CA AB OEL / (c)	: ceiling occupational exposure limit
CA BC OEL / C	: ceiling limit
CA QC OEL / C	: Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan

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Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

CA / EN