

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

<u>Name</u>	<u>CAS number</u>	<u>% (w/w)</u>
sodium hypochlorite, solution	7681-52-9	10 - 30

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of required first aid measures

Eye contact In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Skin contact Rinse with water. Remove contaminated clothing and wash it before reuse. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Ingestion Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Get medical attention if symptoms occur.

Inhalation Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention. If necessary, call a poison center or physician. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Eye contact Adverse symptoms may include the following:
pain
watering
redness

Skin contact Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion Adverse symptoms may include the following:
stomach pains

Inhalation Adverse symptoms may include the following:
respiratory tract irritation
coughing

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (Section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products Decomposition products may include the following materials:
halogenated compounds
metal oxide/oxides

Special fire-fighting procedures Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Initiate spill response procedures if required.
Personal protection	Put on appropriate personal protective equipment (see Section 8).
Cleaning method	Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.
Storage and Incompatibility	Store in accordance with local regulations. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of reach of children. Store away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Ingredient name	Exposure limits
sodium hypochlorite solution Cl active	AIHA WEEL (United States, 7/2018). STEL: 2 mg/m ³ 15 minutes.

Appropriate engineering controls Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Eye/face protection Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

Hands and Body protection No specific protective equipment required under normal use conditions. Prolonged or severe exposures might require to wear chemical-resistant gloves.
No special protective clothing is required.

Respiratory protection No specific protective equipment required under normal use conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.	pH	12.5	Flash point	Not available.
Color	Yellowish.	Relative density	1.17	Melting point	Not available.
Odor	Chlorine	Viscosity	Not available.	Boiling point	Not available.
Odor threshold	Not available.	Vapor pressure	Not available.	Fire point	: Not available.
Solubility in water	: Not available.	Vapor density	: Not available.	Evaporation rate	: Not available.
Decomposition temperature	: Not available.	Auto-ignition temperature	: Not available.		
Partition coefficient: n-octanol/ water	: Not available.	Flammability (solid, gas)	: Not available.		
Lower and upper explosive (flammable) limits	: Not available.				

10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Incompatible materials	Reactive or incompatible with acids.
Conditions to avoid	No specific data.
Possibility of hazardous reactions	May cause an exothermic reaction in presence of acids.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Route of exposure	Not available.	
	<u>Potential acute health effects</u>	<u>Symptoms</u>
Eye contact	May cause eye burn	Adverse symptoms may include the following: pain watering redness
Skin contact	May cause skin burns	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	May cause burns to mouth, throat and stomach.	Adverse symptoms may include the following: stomach pains
Inhalation	May cause respiratory irritation. Inhalation of vapors or mist may cause respiratory tract irritation.	Adverse symptoms may include the following: respiratory tract irritation coughing

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
sodium hypochlorite solution Cl active	LC50 Inhalation Gas.	Rat	>10500 mg/m ³	1 hours
	LD50 Oral	Rat	8910 mg/kg	-

Information on toxicological effects

Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Sensitization	Not available.
Carcinogenicity	No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
sodium hypochlorite solution Cl active	Acute EC50 0.67 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
	Acute LC50 56400 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 32 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 32 µg/l Marine water	Fish - Oncorhynchus kisutch - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.5 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours

	Chronic NOEC 0.1 ppm Fresh water	Fish - Cyprinus carpio - Young	30 days
Persistence and degradability	: Unknown	Bioaccumulative potential : Unknown	Mobility in soil : Unknown Other adverse effects : Unknown

13. DISPOSAL CONSIDERATIONS

Disposal methods Dispose content and container in accordance with local, regional and national regulation in force.

14. TRANSPORT INFORMATION

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	TDG Placard
TDG Classification	UN1791	Hypochlorite solution (sodium hypochlorite, solution)	8	III	

Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

Additional information See shipping documents for specific information on DOT, IMDG or IATA

15. REGULATORY INFORMATION

Canadian lists

Canadian NPRI None of the components are listed.

CEPA Toxic substances None of the components are listed.

Canada inventory All components are listed or exempted.

International lists

United States All components are active or exempted.

16. OTHER INFORMATION

Hazardous Material Information System (U.S.A.)

Health Hazard	0
Fire Hazard	0
Reactivity	0
Personal Protection	

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Prepared by : Regulatory Affairs Department
 Sani-Marc Inc.
 42 rue de l'Artisan
 Victoriaville, Qc
 G6P 7E3
 1-819-758-1541

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