PATHOSANS, LLC

Material Safety Data Sheet

Version 1.2
Revised 11-04-2011

1. Product and Company Identification

Product name : Dilute Hypochlorous Acid Mixture
General use : Disinfecting, sanitizing
Chemical family : Inorganic solution in water, acidic sanitizer
Formula : $H_2O + HClO$

Manufactured by:
PathoSans, LLC.
200 W. North Ave.
Glendale Heights, IL 60139

Emergency Response Numbers:
24 Hour Emergency 414.277.1311
CHEMTREC Emergency 800.424.9300

2. Composition and Information on Ingredients

Component Name	CAS Number	OSHA Hazard	EINECS #	% by Weight
Hypochlorous Acid	7790-92-3	Yes	232-232-5	< 1 %
Water		No		> 99%

3. Hazards Identification

EPA Rating (with 0 for no hazard to 4 for life-threatening):
Health Hazard – 1; Fire Hazard – 0; Reactivity – 1; Special – none

Physical State : Colorless liquid with slight alkaline odor
Immediate Concerns : No hazard expected under normal condition of use

Potential Health Effects:
Inhalation: Insure proper ventilation of storage tanks if applicable
Skin: May cause dryness
Eye: Direct exposure could produce irritation
Ingestion: Ingestion of large quantities (greater than one liter or one quart) may produce gastric discomfort, nausea, vomiting or diarrhea
Carcinogenicity: Active ingredients are not listed by OSHA EPA or any other authority as a carcinogen or tumor promoter

4. First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes while frequently lifting upper and lower eyelids. Consult a physician if irritation results.
Skin Contact: Rinse with water. If redness or irritation is severe consult a physician.
Inhalation: If dizziness occurs immediately get into open space – no other action is required.
Ingestion: Drink large quantities of water.

5. Fire and Explosion Data

Flammability of the Product:	Non-flammable
Auto-Ignition Temperature:	No data
Flash Points:	None
Flammable Limits:	Not applicable
Products of Combustion:	Not available
Fire Hazards in Presence of Various Substances:	Product in concentrated form may react with some metals (ex.: Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas.
Fire Fighting Media and Instructions:	Choose extinguishing media suitable for surrounding materials, chemical type foam, sand, water spray. Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required. Do not allow chlorine gas to accumulate within a confined space, insure proper ventilation to the outside.
General Remarks on Fire Hazards:	Evacuate personnel downwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke. Immediately locate and isolate storage tanks used in conjunction with this product.

6. Accidental Release Measures

Small Spill:	No special requirement, wash to waste.
Large Spill:	No special requirement, wash to waste.

7. Handling and Storage

Precautions:	No special handling required.
Storage:	If containers are used, insure containers are vented to the outside and are located in a well-ventilated area.

8. Exposure Controls/Personal Protection

Ventilation:	Good room ventilation is normally adequate for safe use of this product.
Respiratory Protection:	Good manufacturing practice recommends the use of chemical safety goggles for all applications involving chemical handling.
Protective Clothing:	Not required.

9. Physical and Chemical Properties

Physical State and Appearance	Colorless Liquid
Molecular Weight	Not applicable
pH (1% solution in water)	3.5 to 6
Boiling Point	>100 degrees C
Melting Point	< 0 degrees C
Critical Temperature	No data
Specific Gravity	0.9 g/ml @ 20 degrees C
Vapor Pressure	No data
Vapor Density	No data
Volatility	No data
Odor Threshold	No data
Water/Oil Dist. Coeff.	No data
Ionicity (in water)	No data
Dispersion Properties	See solubility in water
Solubility	Easily soluble in water

10. Stability and Reactivity Data

Stability	The product is stable under normal conditions of temperature and pressure.
Instability Temperature	No data
Conditions of Instability	Mild oxidizing agents. Iron, metals such as aluminum, zinc, tin, etc. Acids. Phosphorous pentoxide. Organic materials. Organic nitro compounds. Chlorinated hydrocarbons. Flourinated hydrocarbons. Acetaldehyde. Chlorine triflouride. Hdroquinone. Maleic anhydride. Tetrahydrofuran. Acrolein. Phosphorous. Ammonia.Trichloroethylene. Leather. Wool. Carbon monoxide gas can form in enclosed or poorly ventilated areas or tanks when alkaline products contact food, beverage, or dairy products.
Hazardous Decomposition Products	Oxides of chlorine: amine vapors.
Hazardous Polymerization	Will not occur under normal conditions.

11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	No data
Chronic Effects on Humans	No data

12. Ecological Information

Ecotoxicity	No data
BOD5 and COD	No data
Products of Biodegradation	Negative
Toxicity of the Products And Biodegradation	The product itself and its products of degradation are not toxic.

13. Disposal Considerations

Waste Disposal	No special precautions are required for this product.

14. Transport Information

DOT Classification	Corrosive Liquid, basic, inorganic, N.O.S.
Hazard Class	8*
Identification Number	UN3266
Packing Group	II
Label Required	Corrosive*
Reportability Quantity (RQ)	1000# (Hypochlorous Acid)*

*This classification pertains to Hypochlorous Acid in concentrated form. This product contains Hypochlorous Acid in highly diluted form.

15. Other Regulatory Information

Federal Regulations: TSCA Inventory Status – This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category:

Immediate (Acute) Health Hazard:	Yes*
Delayed (Chronic) Health Hazard:	Yes*
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard	Yes*

*Pertains to HClO in concentrated form. This product contains HClO in highly diluted form.

SARA Section 302/303/313 HAP

Component	RQ (LBS)*1	RQ (LBS)*2	TPQ(LBS)*3	SEC 313*4	HAP*5
Hypochlorous Acid	1000	N.A.	N.A.	NO	NO

*1 = CERCLA Reportable Quantity
*2 = SARA Reportable Quantity
*3 = SARA EHS Threshold Planning Quantity
*4 = SARA 313 Toxic Chemical/Category
*5 = U.S. EPA Hazardous Air Pollutant

State Regulations: Wisconsin – The following components are listed as a Wisconsin HAP: Hypochlorous Acid

15. Other Regulatory Information, Continued

HMIS Rating System*		NFPA Rating System*	
Health	: 3	Health	: 3
Flammability	: 0	Flammability	: 0
Reactivity	: 2	Reactivity	: 1
		Special Hazard	: None

- Chronic Health Hazard for Hypochlorous acid element in concentrated form. This product contains Hypochlorous acid in highly diluted form.

16. Other Information

Validated by Laura Louis 11/4/2011
Call 208.841.0247

Notice to Reader:
All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, PathoSans, LLC assumes no responsibility for the completeness or accuracy of the information contained herein.