Clarus Water Solutions

H2O2 25-35%, Hydrogen Peroxide (Technical Grade)

Section 1: Identification

Product Name: ***H2O2, Hydrogen Peroxide***

Recommended uses:

- Waste Water Treatment
- Process Water Treatment
- Potable Water Treatment

Contact Information:

Clarus Water Solutions

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Portland Oregon 97210

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Emergency Telephone

(800) 255-3924

ChemTel

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Section 2: Hazards Identification

Signal Word	DANGER
Pictograms	
Oxidizing Liquid	Category 2
Corrosive to Metals	Category 1
Acute Toxicity, Oral	Category 4
Acute Toxicity, Inhalation	Category 4
Target Organ Toxicity (single exposure)	Category 3
Skin Corrosion/ Irritation	Category 1
Serious Eye Damage/Irritation	Category 1

Hazard Statements:

H273	May intensify fire; Oxidizer
H290	May be corrosive to metals
H302	Harmful if swallowed
H315	Causes skin corrosion
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. -- No Smoking.
P220	Keep/Store away from clothing/organic material/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P234	Keep only in original container.
P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash with soap and water thoroughly after handling.

P270	Do not eat, drink, or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P283	Wear fire/flame resistant/retardant clothing.

Response Statements:

P301+P331 +P330	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P353 +P361	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P306+P360	IF ON CLOTHING: Rinse immediately contaminated CLOTHING and SKIN with plenty of water before removing clothes.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P337+P313	IF EYE irritation persists: Get medical aadvice/attention.
P352	Wash with plenty of soap and water.
P363	Wash Contaminated clothing before reuse.
P370+P378	In case of fire: Use water fog, dry chemical, carbon dioxide or regular foam.
P371+P380 +P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to risk of explosion.
P390	Absorb spillage to prevent material damage.

Storage Statements:

P404	Store in a closed container.
P405	Store locked up.
P406	Store in corrosive resistant container with resistant inner liner.

Disposal Statements:

P500	Dispose of contents/container following local/regional/federal regulation.

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Section 3: Composition/information

Ingredients	Synonyms	CAS Number	EINEC#	Weight %	Hazards
Water		7732-18-5	231-791-2	65-75%	
Hydrogen Peroxide	Oxygenated Water	7722-84-1	231-765-0	25-35%	Severe burns and eye damage

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1).

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

Section 4: First-Aid Measures

Eye Contact	If this product enters the eyes, check for and remove any contact lenses. Open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.
Skin Contact	If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. Seek medical attention. Wash contaminated clothing before reuse, discard contaminated shoes.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. Seek immediate medical attention.

Ingestion	If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.
Note to Rescuers	Victims of chemical exposure must be taken for medical attention. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Symptoms may be delayed. Take a copy of label and SDS to physician or health professional with victim.
Note to Physician	There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation). Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Section 5: Fire-Fighting Measures

Flashpoint	Non-Flammable
Auto-ignition Temp	Not Applicable
LEL	Not Applicable
UEL	Not Applicable
Reactivity	
Fire and Explosion Prevention	Isolate from all reducers, combustibles, heat, and open flame.
Suitable and Unsuitable Extinguishing Media	Use water fog, foam, dry chemical powder, carbon dioxide. Use extinguishing agent suitable to the surrounding fire. Do not use halogenated extinguishing agents.
Special Equipment and Precautions	Cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear (helmet with face shield,

	bunker coats, gloves & rubber boots). Wear Self-Contained Breathing Apparatus. No skin surface should be exposed.
Special Fire Fighting Procedures	Closed containers may burst if exposed to extreme heat. Applying to hot surfaces requires special precautions. May decompose upon heating to produce corrosive and/or toxic fumes.
Hazardous Combustion Products	

Section 6: Accidental Release Measures

Spill and Leak Response and Environmental Precautions	Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. Stop leak if you can do it without risk. Prevent additional discharge of material, if possible to do so without hazard. For large spills, implement cleanup procedures and, if in public area, advise authorities.
Personal Precautions, Protective Equipment, Emergency Procedures	The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves, they should be Level B: chemical resistant gloves, suit and boots, hard-hat, and Self-Contained Breathing Apparatus specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations. Full encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.

Environmental Precautions	Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Clean surface thoroughly to remove residual contamination. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.
Methods and Material for Containment and Clean-up	Dike far ahead of liquid spill for later disposal. Absorb spilled liquid polypads or other suitable absorbent material. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Use non-combustible absorbent (such as: sand, soil, etc.). Shovel up and place all spill residue in suitable containers. Clean contaminated surfaces thoroughly. Dispose of residue at an appropriate waste disposal facility according to applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

Section 7: Handling and Storage

Incompatible Materials	Incompatible with strong bases and metals. Avoid organics, organic acids, cyanides. Reacts with water.
Storage and Handling	Store locked up in a cool, dry, well-ventilated corrosive materials storage area away from incompatible materials. Keep containers tightly closed and protect them from physical damage. Protect from moisture. Mixing with water produces a strongly exothermic reaction that may spray caustic solution in the immediate area. When mixing with water, always add caustic slowly to the water, never add water to concentrated caustic. Keep only in original container. Do not breathe dusts or mists. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection, face protection.

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Section 8: Exposure Controls / Personal Protection

Component	Exposure Limits	Basis	Source
Hydrogen Peroxide	1.4 mg/m^3 (1 ppm)	Permissible Exposure Limit	OSHA
Hydrogen Peroxide	1.4 mg/m^3 (1 ppm)	Threshold Limit Value	ACGIH

Eyes: Safety glasses or goggles and a face shield.
Skin: Skin should be covered at all times.
Hands: Nitrile or rubber gloves.
Respiratory: Wear full respiratory equipment if proper ventilation cannot be achieved.

Section 9: Physical and Chemical Properties

Physical State	Aqueous solution
Appearance	Water-white
Odor	Pungent
Odor Threshold	Not available
pH (Neutrality)	2.50 +/- 0.40
Melting/Freezing Point	-33C, -27F (35% H202)
Boiling Point	108C, >226F (35% H202)
Flash Point	Not Applicable
Evaporation Rate	Not Available
Flammability	Non Applicable
Upper/Lower Flammable limit in air	Not Applicable
Explosive Limits	Not Applicable
Vapor Pressure	0.75 mmHg at 30C (50% H202)
Vapor Density	1.0 (50% H202)
Relative Density	1.108
Water solubility	Complete
Partition Coefficient	Not Available
Auto-ignition Temp	Not Applicable
Decomposition Temp	> 60C, >140F (slow decomposition at 35% H202)

Viscosity	1.17 mPa.s (50% H202 at 20C)
Specific Gravity	1.110 (water=1)

Section 10: Stability and Reactivity Data

Stability	Stable under normal conditions. No hazardous reactions when kept from incompatibles
Instability Temperature	Not available
Incompatibilities	Isolate from all reducers, combustibles, heat, and open flame.
Reactivity	Strong oxidation reaction with organics and metals produces heat and
Polymerization	Will not occur
Hazardous Decomposition Products	Oxygen

Section 11: Toxicological Information

Acute Effects	Causes severe burns to skin, defatting, dermatitis. Causes severe burns to eyes resulting in redness, tearing, blurred vision, and potentially blindness. Causes severe respiratory tract irritation. May cause permanent digestive tract damage or death if swallowed.

Chronic Effects:

Carcinogenicity	This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.
Target Organs	May cause damage to target organs based on animal data.
Irritancy	Toxic to contaminated tissue.
Sensitization	No component is known as a sensitizer.
Mutagenicity	No known reports of mutagenic effects in humans.
Embryotoxicity	No known reports of embryotoxic effects in humans.
Teratogenicity	No known reports of teratogenic effects in humans.
Reproductive Toxicity	No known reports of reproductive effects in humans.

Section 12: Ecological Information

Ecotoxicity	May be harmful or fatal to plant and animal life if released into the environment.
BOD5 and COD	Not available
Reproductive Toxicity	No known reproductive effects
Degradability	Completely biodegradable
Mobility in Soil	Not available
Bioaccumulation	Not available
Other Effects	Not available

Section 13: Disposal Considerations

Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. Empty containers may contain residues. Follow all label warnings even after container is emptied. Refer to sections 7 and 8 for proper storage, handling, and personal protection.
ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES. EPA CHARACTERISTIC: D002

Section 14: Transportation Information

UN Number	UN2014
Proper Shipping Name	Hydrogen Peroxide, Aqueous Solution
Packing Group	II
Hazard Class	5.1
Drum Label	
Emergency Response Guidebook Number	
Marine Pollutant	No
IBC Code	Not Available

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Section 15: Regulatory Information

SARA 302	Not Listed
SARA 304	Not Listed
SARA 311/312	Acute Health Hazard

All Components of this product are listed on the TSCA Inventory.

SARA Title III Section 313 Supplier Notification:
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all SDSs that are copied and distributed for this material.

SARA Title III Ingredients	CAS#	CERCLA RQ (lbs)	Threshold Planning Quantity (lbs)
*			

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):
This product does not contain any chemicals known to the State of California to cause cancer, developmental toxicity, or reproductive toxicity.

HMIS	Health Hazard: 3 Fire Hazard: 0 Reactivity: 1 Personal Protection: C
NFPA	Health: 3 Flammability: 0 Reactivity: 1 Specific Hazard: Gloves, Glasses, Protective apron

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Section 16: Other Information

Prepared by: Walt Weyler

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