SAFETY DATA SHEET

Hydrogen Peroxide 35%

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**Hydrogen Peroxide 35%**
Product code:	2046
Recommended use of the chemical and restrictions on use:	Bleaching agent, oxidizing agent, water treatment, cosmetics.
Chemical family:	Inorganic peroxide solution.
Name, address and phone # of supplier:	Aqua Bond Inc. PO Box 63635 Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
OXIDIZING LIQUID- CATEGORY 2
CORROSIVE TO METALS – CATEGORY 1
SKIN IRRITATION - CATEGORY 2
SERIOUS EYE DAMAGE/EYE IRRITATION – CATEGORY 1
STOT (SINGLE EXPOSURE) – CATEGORY 3 (RESPIROTORY)

Label elements:



Signal word: Danger

Hazard statements:
H290: May be corrosive to metals
H272 – May intensify fire; oxidizer
H315- Causes skin irritation
H318- Causes serious eye damage
H335- May cause respiratory irritation

Precautionary statements:
P210- Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P220- Keep/Store away from clothing combustible materials.
P221- Take any precaution to avoid mixing with combustibles
P234: Keep only in original packaging
P264- Wash skin thoroughly after handling.
P280- Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a poison center/doctor.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for

breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352: If on skin: Wash with plenty of water.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P390: Absorb spillage to prevent material damage.
P370: In case of fire: Use water spray or fog to extinguish.
P406: Store in corrosive resistant container with a resistant inner liner.
P405: Store locked up.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards: Other hazards which do not result in classification: Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	**CAS Number**	**Concentration (%)**
Hydrogen Peroxide	7722-84-1	30-40
Water	7732-18-5	60-70

(The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.)

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion: Seek immediate medical attention/advice. Do not induce vomiting. Have victim rinse mouth with water, and then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person.

Inhalation: Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact: Remove/Take off immediately all contaminated clothing. Flush contaminated area with lukewarm, gently running water for at least 5 to 10 minutes or until the chemical is removed. Seek immediate medical attention/advice. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed.

Eye contact: Immediately flush eyes thoroughly with running water for at least 20 to 30 minutes. Seek immediate medical attention/advice.

Most important symptoms and effects, both acute and delayed:

May cause severe eye irritation. Permanent eye damage including blindness could result. Symptoms may include redness, pain, tearing and conjunctivitis. May cause respiratory irritation. Symptoms include coughing, shortness of breath and wheezing. Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract. Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.

Indication of any immediate medical attention and special treatment needed:

No specific treatment. Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	
Suitable	Fires should be flooded with large amounts of water. Avoiding using other types of extinguishing materials, such as foam or dry chemicals.
Unsuitable	Avoid using Carbon dioxide or other similar extinguishing agents as they are not effective in fires involving oxidizers.
Special hazards arising from the substance:	May intensify fire; oxidizer. Substance releases oxygen when heated, which may increase the severity of an existing fire.
Flammability classification (OSHA 29 CFR 1910.106)	Not flammable.
Hazardous combustion products	Oxygen
Special protective actions for fire-fighters:	Fight fires from a safe distance. Evacuate personnel to safe areas. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
Environmental precautions:	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.
Methods and materials for containment and cleaning up:	Ventilate area of release. Remove all sources of ignition. Stop leak if you can do so without risk. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.
Special spill response procedures:	In case of transportation accident, contact CANUTEC (613) 996-6666.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition.

	Keep away from combustible material. Ground all equipment during handling. Never return contaminated material to its original container. Combustible materials exposed to Hydrogen Peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all Hydrogen Peroxide is removed. Residual Hydrogen Peroxide that is allowed to dry (upon evaporation Hydrogen Peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.
Conditions for safe storage:	Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Store in corrosion-resistant containers. Store in vented containers. Do not store on wooden pallets. Protect from sunlight. Unsuitable materials for containers: Steel; Iron; Nickel; Copper.
Incompatible materials:	Combustible materials: Nitric acid: Organic materials: Metals: Reducing agents: Potassium Pentaborate Tetrahydrate.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Exposure limits

Ingredient	**Exposure limits**
Hydrogen peroxide	**ACGIH TLV** 1 ppm TWA **OSHA PEL** 1 ppm; 1.4 mg/m3 PEL
Engineering controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value. Use explosion-proof equipment.
Individual protection measures:	Eyes/face: Chemical splash goggles are recommended. A full face shield may also be necessary. Skin: Impervious gloves must be worn when using this product. Wear impervious gloves, such as butyl rubber. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Respiratory: Respiratory protection is required if the concentrations exceed the TLV. Wear a positive-pressure supplied-air respirator. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Water white liquid.
Odour:	Pungent.
Odour threshold:	0.48ppm.
pH:	0-3

Melting/Freezing point:	17 to -56°C.
Initial boiling point and boiling range:	103-120°C.
Flash point:	Not available
Evaporation rate (BuAe = 1):	<1.
Flammability:	Not applicable.
Upper and lower flammability limits:	Not available.
Vapour pressure:	48pa @30°C
Vapour density:	(Air = 1) 0.66-0.95.
Relative density:	1.07-1.23
Solubility:	Soluble in water and in all proportions in many polar solvents, e.g. low molecular weight alcohols, glycols and ketones; soluble in diethyl ether and carboxylic esters (greater 65%); insoluble in petroleum ether..
Partition coefficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available
Decomposition temperature:	150-152°C.
Viscosity:	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols, and organic peroxides.
Chemical stability:	Dangerously reactive material. Stability depends upon many factors including temperature, pH, and the presence of impurities. Solutions that are completely free of contamination are relatively stable. May decompose violently if impurities are present.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Do not keep container sealed. Keep out of direct sunlight. Keep away from combustible material.
Incompatible materials:	Reducing agents; Combustible material; Organic materials; Reactive metals; Fuel; Solvent; Alkalies
Hazardous decomposition products:	None known, refer to hazardous combustion products in Section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure:	SKIN AND EYES: yes INHALATION: yes

INGESTION: yes
SKIN ABSORPTION : no

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Inhalation: If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Inhalation of extremely high concentrations could cause pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
Ingestion: May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, nausea, vomiting, diarrhea and collapse.
Skin: Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.
Eyes: Causes serious eye damage. Permanent eye damage including blindness could result. Symptoms may include severe pain, tearing, redness, swelling and blurred vision.

Potential Chronic Health Effects: None known or reported by the manufacturer.

Mutagenicity: Not expected to be mutagenic in humans.

Carcinogenicity: This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Hydrogen peroxide

Reproductive effects & Teratogenicity: Not expected to have other reproductive effects.

Sensitization to material: Not expected to be a skin or respiratory sensitizer.

Specific target organ effects: Eyes, skin, respiratory system and digestive system. This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory) May cause respiratory irritation.

Medical conditions aggravated by overexposure: Pre-existing skin, eye and respiratory disorders.

Synergistic materials: Not available

Toxicological effects: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.
ATE oral = 3408.57 mg/kg

Chemical name	**LC50(4hr) inh, rat**	**(Oral, rat)**	**LD50 (Rabbit, dermal)**
Hydrogen peroxide	0.17 mg/L 4 h (no deaths)	1193 mg/kg	>2000 mg/kg

Other important toxicological hazards: None known or reported by the manufacturer.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: Not expected to be harmful to aquatic organisms. See the following tables for the substance's ecotoxicity data. Do not allow material to contaminate ground water system.

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Hydrogen peroxide	7722-84-1	16.4mg/L (Fathead minnow)	N/Av	None

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Hydrogen peroxide	7722-84-1	2.4mg/L Water flea	N/Av	None

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Hydrogen peroxide	7722-84-1	N/Av	0.63 mg/L (Green algae)	None

Persistence and degradability: Biodegradation is not applicable to inorganic materials.

Bioaccumulative potential: No data is available on the product itself.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Hydrogen peroxide (CAS 7722-84-1)	1.50	no bioaccumulation

Mobility in soil: No data is available on the product itself.

Other adverse effects: No data is available on the product itself.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

	TDG
UN Number:	2014
UN proper shipping name:	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Transport hazard class:	5.1(8)
Packing group:	II
Special precautions for user:	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: REGULATORY INFORMATION

Canada inventory (DSL): All components are listed on DSL.

SECTION 16: OTHER INFORMATION

Revision date: December 18, 2023

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

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