



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL MSDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: BAQUASPA OXIDIZER

1. PRODUCT AND COMPANY IDENTIFICATION

**Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204
Norwalk, CT 06856-5204**

REVISION DATE: 03/10/2009
SUPERCEDES: 01/19/2004

MSDS Number: 000000005764
SYNONYMS: Dihydrogen dioxide (solution)
CHEMICAL FAMILY: Hydrogen peroxide
DESCRIPTION / USE: Treatment of spa water
FORMULA: None established

2. HAZARDS IDENTIFICATION

OSHA Hazard
Classification:

Moderate to Severe Eye Irritant

Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known interactions
Medical Conditions Aggravated: No data available

Human Threshold Response Data

Odor Threshold

HYDROGEN PEROXIDE (H₂O₂) Not established.

Irritation Threshold

HYDROGEN PEROXIDE (H₂O₂) 150 mg/m³

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	2	0	0	
NFPA	2	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity: Not expected to be an inhalation hazard at ambient conditions. Not expected to be irritating. If product is heated, inhalation of high concentrations of vapors may cause mild irritation to mucous membranes. Not expected to be toxic by inhalation.



Skin Toxicity:	Not expected to be irritating to the skin. Not expected to be toxic from dermal contact.
Eye Toxicity:	May cause moderate to severe irritation, consisting of redness, swelling, and mucous membrane discharge to the conjunctiva. No corneal involvement or visual impairment is expected.
Ingestion Toxicity:	Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Not expected to be toxic by ingestion.
Acute Target Organ Toxicity:	Moderately to severely irritating to the eyes. Ingestion may cause gastrointestinal discomfort.

Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Reproductive and Developmental Toxicity:	No reproductive or developmental risk to humans is expected from exposure to this product.
Inhalation:	There are no known or reported effects from chronic exposure.
Skin Contact:	There are no known or reported effects from chronic exposure.
Ingestion:	There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer. A similar product was found to be a negative skin sensitizer in the Guinea pig maximization method test.
Chronic Target Organ Toxicity:	There are no known or reported target organ effects from chronic exposure.
Supplemental Health Hazard Information :	No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
HYDROGEN PEROXIDE (H ₂ O ₂)	7722-84-1	7.50 -

4. FIRST AID MEASURES

Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
Skin Contact:	IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.



5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	Not applicable
Autoignition Temperature:	Not applicable
Fire / Explosion Hazards:	Material will not ignite or burn. Oxygen is a decomposition product of hydrogen peroxide. The generation of oxygen will increase the burning rate or ignitable materials.
Extinguishing Media:	Water spray
Fire Fighting Instructions:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water to cool containers.
Hazardous Combustion Products:	Oxygen
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved full-face positive pressure supplied-air respirator.
<u>Spill Mitigation Procedures</u>	
Air Release:	Vapors may be suppressed by the use of water fog. Contain all liquids for treatment or disposal.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.
Land Release:	Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dilute spilled material with large amounts of water. Do not place spill materials back in their original containers. Place in containers compatible for this material in a liquid form. After removal, flush contaminated area thoroughly with water. Avoid runoff into storm sewers and ditches which lead to waterways.
Additional Spill Information :	Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.
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Storage: Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Keep product tightly sealed in original containers.

Incompatible Materials for Storage: Violent, catalytic decomposition will occur in contact with certain metals, such as iron, copper, chromium, brass, bronze, lead, silver, manganese, or their salts. Decomposed by alkalies and even ordinary dust or rust. Bases Reducing agents Permanganates alcohols

Empty Container Warning: Empty containers retain product residue (liquid and/or vapor) and can be dangerous.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : NIOSH approved full-face positive pressure supplied-air respirator

Skin Protection : Wear impervious gloves to avoid skin contact.

Eye Protection: Use chemical goggles.

Protective Clothing Type: Butyl rubber, Neoprene, Natural rubber, Nitrile

General Protective Measures: Emergency eyewash should be provided in the immediate work area.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
HYDROGEN PEROXIDE (H ₂ O ₂)	7722-84-1	ZUS_ACGIH	1 ppm TWA 1996 Adoption, Refers to Appendix A -- Carcinogens. 1.4 mg/m ³ TWA 1996 Adoption, Refers to Appendix A -- Carcinogens.
HYDROGEN PEROXIDE (H ₂ O ₂)	7722-84-1	ZUS_OSHAPO	1 ppm TWA 1.4 mg/m ³ TWA
HYDROGEN PEROXIDE (H ₂ O ₂)	7722-84-1	ZUS_OSHAP1	1 ppm TWA 1.4 mg/m ³ TWA
HYDROGEN PEROXIDE (H ₂ O ₂)	7722-84-1	NIOSH-IDLH	75 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: liquid
Form clear



Color:	Colorless
Odor:	None
Molecular Weight:	No data
Specific Gravity :	1.1
pH :	3.9
Boiling Point:	103 DEG°C / 219 DEG°F
Freezing Point:	No data
Melting Point:	No data
Density:	No data
Vapor Pressure:	186.7 hPa
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	Soluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	No data
Oxidizing:	Product has oxidizing properties.
Volatiles, % by vol.:	No data
VOC Content	No data
HAP Content	No data

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures, Contact with incompatible substances
Chemical Incompatibility:	Bases, Reducing agents, Contact with combustible materials may cause a fire., copper & copper alloys, metals, brass
Hazardous Decomposition Products:	Oxygen is a decomposition product of hydrogen peroxide. The generation of oxygen will increase the burning rate or ignitable materials.
Decomposition Temperature:	No data

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

HYDROGEN PEROXIDE LD50 (35% Hydrogen Peroxide) = 1,232 mg/kg Rat
(H2O2)

Dermal LD50 value:

HYDROGEN PEROXIDE LD50 (35% Hydrogen Peroxide) > 2,000 mg/kg Rabbit
(H2O2)

Inhalation LC50 value:

HYDROGEN PEROXIDE Inhalation LC50 8 h (90% Hydrogen Peroxide) > 2,000 ppm Rat
(H2O2)

HYDROGEN PEROXIDE Inhalation LC50 4 h (50% Hydrogen Peroxide) > 0.17 MG/L Rat
(H2O2)



Product Animal Toxicity

Oral LD50 value: LD50 Believed to be > 5,000 mg/kg rat
Dermal LD50 value: LD50 Believed to be > 5,000 mg/kg rabbit
Inhalation LC50 no data available

value:

Skin Irritation: Not expected to be irritating to the skin.

Eye Irritation: This material is expected to be moderately to severely irritating.

Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer., A similar product was found to be a negative skin sensitizer in the Guinea pig maximization method test.

Acute Toxicity: Moderately to severely irritating to the eyes. Ingestion may cause gastrointestinal discomfort.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: No reproductive or developmental risk to humans is expected from exposure to this product.

HYDROGEN PEROXIDE (H2O2) Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Not known or reported to be mutagenic.

HYDROGEN PEROXIDE (H2O2) This product has been tested for mutagenicity. Tests revealed both positive and negative results. Based on the weight of evidence, we judge this product NOT to be a mutagenic hazard.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

HYDROGEN PEROXIDE (H2O2) The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans. The FDA determined that this product is not carcinogenic in laboratory animals.

12. ECOLOGICAL INFORMATION

Ecological Toxicity Values for: HYDROGEN PEROXIDE (H2O2)

Fathead minnow (<i>Pimephales promelas</i>),	-	96 h LC50 = 16.4 mg/l
Channel Catfish (<i>Ictalurus punctatus rafinesque</i>),	-	96 h LC50 = 37.4 mg/l
Rainbow trout (<i>Salmo gairdneri</i>),	-	48 h Lethal > 40 mg/l
Daphnia magna,	-	24 h EC50= 7.7 mg/l
Daphnia pulex	-	48 h LC50= 2.4 mg/l



13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Disposal Methods : As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : Not applicable

14. TRANSPORT INFORMATION

Land (US DOT): Not Regulated NOT REGULATED AS A DOT HAZARDOUS MATERIAL
Water (IMDG): NOT REGULATED AS A HAZARDOUS MATERIAL,

Flash Point: Not applicable
Air (IATA): NOT REGULATED AS A HAZARDOUS MATERIAL,
Emergency Response Guide Number: Not applicable

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): Not registered in the US under FIFRA.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health Immediate (Acute) Health Hazard
Physical None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302	TPQ (threshold planning quantity)	HYDROGEN PEROXIDE (CONC >52%) Value: 1,000lbs
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Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	None established
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ZUS_SAR302 Reportable quantity

HYDROGEN PEROXIDE (CONC >52%)
Value: 1,000lbs

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313 De minimis concentration

None established

Clean Air Act Toxic ARP Section 112r:

CAA 112R None established

Clean Air Act Socmi:

HON SOC None established

Clean Air Act VOC Section 111:

CAA 111 None established

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
7722-84-1	HYDROGEN PEROXIDE (H2O2)
ZUSPA_RTK	

US. Commonwealth of Pennsylvania - Department of Labor and Industry; Pennsylvania Code Title 34, Labor and Industry Chapter 323

1990-01-01

HYDROGEN PEROXIDE (CONC > 52 PERCENT)

environmental hazard, hazardous substance

US. Commonwealth of Pennsylvania - Department of Labor and Industry; Pennsylvania Code Title 34, Labor and Industry Chapter 323

1990-01-01

HYDROGEN PEROXIDE (H2O2)

hazardous substance

New Jersey:

CAS #	COMPONENT NAME
7722-84-1	HYDROGEN PEROXIDE (H2O2)
ZUSNJ_RTK	

US. New Jersey Department of Environmental Protection -; Bureau of Hazardous Substances New Jersey Right to Know Law, Hazardous Substance List [P.L. 1983, C. 315, NJSA 34:5A-1 et seq]

1989-12-01

HYDROGEN PEROXIDE

special health hazard substance, special health hazard, corrosive, special health hazard,



mutagen, special health hazard, reactive - third degree

Massachusetts:

CAS #	COMPONENT NAME
7722-84-1	HYDROGEN PEROXIDE (H ₂ O ₂)
ZUSMA_RTK	

US. The Commonwealth of Massachusetts Department of Public Health; Massachusetts Right-to-know law, The Massachusetts Substance List, 105 CMR 670.000

1991-07-01

HYDROGEN PEROXIDE

Extraordinarily hazardous, massachusetts hazardous substance

California Proposition 65:

CAS #	COMPONENT NAME
ZUSCA_P65	None established

WHMIS Hazard Classification:

Canada. Canada Hazardous Products Act SOR/88-64

1988-01-20

Concentration by Weight: 1 percent by weight

845

HYDROGEN PEROXIDE

16. OTHER INFORMATION

MSDS REVISION STATUS : Revised to meet the ANSI standard of 16 sections
SECTIONS REVISED: First formulated version in SAP.
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .