

SAFETY DATA SHEET



HYDROGEN PEROXIDE 34.5% (ALL GRADES)

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Oxygenated and Derivatives

Customer Service Telephone Number: 1-800-346-5757
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: HYDROGEN PEROXIDE 34.5% (ALL GRADES)
Synonyms: Not available
Molecular formula: H₂O₂
Chemical family: peroxides
Molecular weight: 34.01 g/mol
Product use: Bleaching agent, Oxidizing agent, Cosmetics, Water treatment

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

Color: colourless
Physical state: liquid
Odor: pungent

***Classification of the substance or mixture:**

Oxidizing liquids, Category 2, H272
Oral: Acute toxicity, Category 4, H302
Serious eye damage, Category 1, H318

*For the full text of the H-Statements mentioned in this Section, see Section 16.

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GHS-Labeling

Hazard pictograms:



Signal word:

Danger

Hazard statements:

- H272 : May intensify fire; oxidizer.
- H302 : Harmful if swallowed.
- H318 : Causes serious eye damage.

Supplemental Hazard Statements:

Material decomposes with the potential to produce a rupture of unvented closed containers.

Precautionary statements:

Prevention:

- P210 : Keep away from heat.
- P220 : Keep away from clothing and other combustible materials.
- P221 : Take any precaution to avoid mixing with combustibles.
- P264 : Wash skin thoroughly after handling.
- P270 : Do not eat, drink or smoke when using this product.
- P280 : Wear protective gloves or eye protection or face protection.

Response:

- P301 + P312 : IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
- 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 or doctor.
- P330 : Rinse mouth.
- P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Disposal:

- P501 : Dispose of contents or container to an approved waste disposal plant.

Supplemental information:

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Potential Health Effects:

If swallowed:

May cause: gastrointestinal symptoms, ulceration, burns, accumulation of fluid in the lungs which may be delayed for several hours.(severity of effects depends on extent of exposure) .

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Water	7732-18-5	65.5 %	Not classified
Hydrogen peroxide (>=20 to <35%)	7722-84-1	34.5 %	H272, H302, H318

**For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES
4.1. Description of necessary first-aid measures:
Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed:

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For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information if applicable) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of any immediate medical attention and special treatment needed:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

Notes to physician:

Exposure to material may cause delayed lung injury resulting in pulmonary edema and pneumonitis. Exposed individuals should be monitored for 72 hours after exposure for the onset of delayed respiratory symptoms.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media (suitable):

water spray, water fog

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Oxidizing material

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Decomposition will release oxygen, which will intensify a fire.

Cool closed containers exposed to fire with water spray.

Closed containers of this material may explode when subjected to heat from surrounding fire.

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

Explosive when mixed with combustible material.

Avoid breathing fumes from fire exposed material.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:

Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid generation of vapors. Avoid contact with cellulose, paper, sawdust or similar substances. Risk of self-ignition or promotion of fires. Combustible materials exposed to hydrogen peroxide should be rinsed immediately with large amounts of water to ensure that all the hydrogen peroxide is removed. Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay and place into suitable properly labeled containers for prompt disposal. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

HYDROGEN PEROXIDE 34.5% (ALL GRADES)**SECTION 7: HANDLING AND STORAGE****Handling****General information on handling:**

Do not taste or swallow.
Do not get in eyes, on skin, or on clothing.
Do not breathe vapor or mist.
Keep from contact with clothing and other combustible materials.
Keep away from heat, sparks and flames.
Keep container tightly closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Wear fire/ flame resistant/ retardant clothing.
Prevent product contamination.
Keep only in the original container.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.
Emptied container retains vapor and product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage**General information on storage conditions:**

Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store in cool, dry, well ventilated area away from sources of ignition such as flame, sparks and static electricity. Protect from sunlight. Store in original container. Store in tightly closed container. Store away from combustibles and incompatible materials. Refer to National Fire Protection Association (NFPA) 430, Code for the Storage of Solid and Liquid Oxidizers.

Storage incompatibility – General:

Store separate from:
Organic materials
Metallic oxides
Combustible materials
Acids
Alkaline materials
Reducing agents
Flammable materials
Dust
Metals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne Exposure Guidelines:****Hydrogen peroxide (7722-84-1)**

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US. ACGIH Threshold Limit Values

Time weighted average 1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 1 ppm (1.4 mg/m³)

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection:

Do not breathe vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact.

When handling this material, gloves of the following type(s) should be worn:

Neoprene

Polyvinylchloride

Impervious butyl rubber gloves

Wear a face shield, chemical goggles and chemical resistant clothing such as an approved splash protective suit made of SBR Rubber, PVC, Gore-Tex or a HAZMAT Splash Protective Suit (Level A, B, or C) when splashing may occur (such as connecting/disconnecting, mechanical first break). For foot protection, wear boots made of NBR, PVC, polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboots made of nylon or nylon blends. DO NOT use cotton, wool or leather, as these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Rinse immediately if skin is contaminated. Remove contaminated clothing and shoes immediately. Thoroughly rinse the outside of gloves and protective clothing with water prior to

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removal. Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	colourless
Physical state:	liquid
Odor:	pungent
Odor threshold:	No data available
Flash point	None.
Lower flammable limit (LFL):	Not applicable
Upper flammable limit (UFL):	Not applicable
pH:	No data available
Density:	1.13 g/cm ³ (68 °F (20 °C))
Specific Gravity (Relative density):	1.13 (68 °F (20 °C))Water=1 (liquid)
Vapor pressure:	24 mmHg (68 °F (20 °C))
Relative vapor density:	1 (Air = 1.0)
Boiling point/boiling range:	226 °F (108 °C)
Melting point/range:	No data available.
Freezing point:	-27 °F (-33 °C)
Evaporation rate:	No data available
Solubility in water:	completely soluble
Viscosity, dynamic:	No data available

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% Volatiles:	100 %
Molecular weight:	34.01 g/mol
Oil/water partition coefficient:	(No data available)
Thermal decomposition:	No data available
Flammability:	See GHS Classification in Section 2 if applicable

SECTION 10: STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:

None known.

Materials to avoid:

- Metals
- Organic materials
- Reducing agents
- Metallic oxides
- Dusts
- Combustible materials (e.g., wood, sawdust)
- Alkaline materials
- Acids
- Flammable materials

Conditions / hazards to avoid:

Material decomposes with the potential to produce a rupture of unvented closed containers.

Hazardous decomposition products:

This material decomposes if contaminated, causing fire and possible explosions. Oxygen can be liberated at temperatures above ambient.

SECTION 11: TOXICOLOGICAL INFORMATION

Data on this material and/or a similar material are summarized below.

Data for Hydrogen peroxide (>=20 to <35%) (7722-84-1)

Acute toxicity

Oral:

Harmful if swallowed. (rat) LD50 = 694 - 1,026 mg/kg. (70 %) (as aqueous solution)

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Harmful if swallowed. (rat) LD50 = 801 - 872 mg/kg. (60 %) as aqueous solution

Harmful if swallowed. (rat) LD50 = 1,193 - 1,270 mg/kg. (35 %) as aqueous solution

Harmful if swallowed. (rat) LD50 = 1,520 - 1,620 mg/kg. (9.6 %) as aqueous solution

Dermal:

Practically nontoxic. (rabbit) LD50 = 9,200 mg/kg. (70 %) (as aqueous solution)

No deaths occurred. (rabbit) LD50 > 2,000 mg/kg. (35 %) as aqueous solution

Inhalation:

No deaths occurred. (mouse) 30 min LC50 1.856 mg/l. (70 %) (dust/mist)

No deaths occurred. (rat) 4 h LC0 = 0.17 mg/l. (50 %) (vapor)

Skin Irritation:

Causes severe skin burns. (rabbit) (3 min) (70 %)

Causes skin irritation. (rabbit) (3 min) (50 %)

Causes severe skin burns. (rabbit) (1 h) (50 %)

Causes skin irritation. (rabbit) (4 h) (35 %)

Not irritating. (rabbit) (4 h) (10 %)

Eye Irritation:

Causes serious eye damage. (rabbit) (>= 10 %)

Causes serious eye irritation. (rabbit) (6 %)

Causes mild eye irritation. (rabbit) (5 %)

Not irritating. (rabbit) (3 %)

Repeated dose toxicity

Repeated inhalation administration to rat / affected organ(s): nose / signs: irritation

Subchronic drinking water administration to rat and mouse / affected organ(s): Gastro-intestinal tract / signs: irritation

Carcinogenicity

Chronic drinking water administration to rat and mouse / affected organ(s): Gastro-intestinal tract / Increased incidence of tumors was reported.

Classified by the International Agency for Research on Cancer as: Group 3: Unclassifiable as to carcinogenicity in humans.

Genotoxicity

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Genetic changes were observed in laboratory tests using: bacteria, animal cells

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in laboratory tests using: mice, rats

Human experience**Inhalation:**

Throat: irritation. (based on reports of occupational exposure to workers)

Human experience**Skin contact:**

Skin: bleaching of hair. (based on reports of occupational exposure to workers)

Human experience**Eye contact:**

Eye: irritating. (based on reports of occupational exposure to workers)

Human experience**Ingestion:**

Gastro-intestinal tract: bloating, ulceration, burns. (accidental exposure to concentrated solutions)

Lung: accumulation of fluid in the lungs, death.

SECTION 12: ECOLOGICAL INFORMATION**Chemical Fate and Pathway**

Data on this material and/or a similar material are summarized below.

Data for Hydrogen peroxide (≥ 20 to $< 35\%$) (7722-84-1)**Biodegradation:**

Readily biodegradable. (0.02 d) biodegradation 99 %

Octanol Water Partition Coefficient:

log Pow: -1.57, at 68 °F (20 °C) pH = 7 (Method: calculated)

Ecotoxicology**Data for Hydrogen peroxide (≥ 20 to $< 35\%$) (7722-84-1)****Aquatic toxicity data:**

Harmful. Pimephales promelas (fathead minnow) 96 h LC50 = 16.4 mg/l

Aquatic invertebrates:

Toxic. Daphnia pulex (Water flea) 48 h EC50 = 2.4 mg/l

Algae:

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Canadian Domestic Substances List (DSL)

DSL

All components of this product are on the Canadian DSL

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard, Fire Hazard, Reactivity Hazard

SARA Title III – Section 313 Toxic Chemicals:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H318 Causes serious eye damage.

Miscellaneous:

Grades: ALBONE® 34.5% MS, VALSTERANE® 34.5% FG

Latest Revision(s):

Reference number: 600000754
Date of Revision: 03/29/2022
Date Printed: 03/30/2022

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It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

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