**Alberta Veterinary Laboratories Ltd.**
411 – 19 Street, S. E.
Calgary, AB., Canada.
T2E 6J7
1-403-456-2245

# Safety Data Sheet
# Hydrogen Peroxide 3% USP

*Document No. M-D6-AVL17*

## Section I – Product and Company Identification

**Synonym:** NA
**CAS No.:** 7722-84-1
**Molecular Weight:** 34.015g/mol
**Chemical Formula:** $H_2O_2$
**Product Code:** PXD

**Company Identification:** Alberta Veterinary Laboratories Ltd.
411 – 19 Street, S. E.
Calgary, AB., Canada.
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**For information, call:** 1-403-456-2245
**Emergency Number:** 1-613-996-6666 (CANUTEC)
1-800-463-5060 OR
1-418-656-8090 (Control Poison Center)

## Section II – Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of ingestion. Slightly hazardous in case of inhalation (lung sensitizer). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns.

Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

**GHS labelling**

**Danger**

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| **Hazard pictograms** | GHS05 |
| **Signal word** | Danger |
| **Hazard statements** | H314 Causes severe skin burns and eye damage<br>H318 - Causes serious eye damage |
| **Precautionary statements** | P264 - Wash exposed skin thoroughly after handling<br>P280 - Wear protective gloves, eye protection<br>P302+P352 - IF ON SKIN: Wash with plenty of soap and water<br>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing<br>P310 - Immediately call a POISON CENTER or doctor/physician<br>P332+P313 - If skin irritation occurs: Get medical advice/attention<br>P362 - Take off contaminated clothing and wash before reuse |
| **Storage** | P405 Store locked up. |
| **Disposal** | P501 Dispose of contents / container in accordance with local / national regulations. |

## Section III – Composition/Information on Ingredients

| Ingredient Name | Chemical Formula | CAS No. | % by weight |
|---|---|---|---|
| Hydrogen peroxide | $H_2O_2$ | 7722-84-1 | 3% |
| Water | H2O | 7732-18-5 | 97% |

Toxicological Data on Ingredients: Hydrogen Peroxide: ORAL (LD50): Acute: 2000 mg/kg [Mouse]. DERMAL (LD50): Acute: 4060 mg/kg [Rat]. 2000 mg/kg [ pig]. VAPOR (LC50): Acute: 2000 mg/m 4 hours [Rat]

## Section IV – First Aid Measures

**Description of first aid measures**

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| **General** | In all cases of doubt, or when symptoms persist, seek medical attention immediately. Never give anything by mouth to an unconscious person. |
| **Inhalation** | Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth. |
| **Serious Inhalation** | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be |

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| | hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention. |
| **Eyes contact** | Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention immediately. Cold water may be used. |
| **Skin Contact** | Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. |
| **Serious Skin Contact** | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| **Ingestion** | If swallowed do **NOT** induce vomiting and obtain immediate medical attention. |

**Most important symptoms and effects, both acute and delayed**

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| **Overview** | Inhalation of vapors and mists irritate the nose and throat. Minimally irritating to the eyes and mildly irritating to the skin. |
| **Eyes** | Causes serious eye damage. |
| **Skin** | Causes severe skin burns and eye damage. |

## Section V – Fire Fighting Measures

**Extinguishing media**

Recommended extinguishing media; Flood with water spray of water fog.

**Special hazards arising from the substance or mixture**

Hazardous decomposition: Oxygen, which supports combustion.

Do not breathe mist / vapors / spray.

**Advice for fire-fighters**

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

**Fire Hazards in Presence of Various Substances** combustible materials

**Explosion Hazards in Presence of Various Substances**

Slightly explosive in presence of open flames and sparks, of heat, of organic materials, of metals, of acids.

## Section VI – Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).

**Small Spill**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill**

Corrosive liquid. Oxidizing material. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray

curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed, notify authorities if liquid enters sewers or public waters.

## Section VII – Handling and Storage

**Precautions for safe handling**

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| **Precautions for safe handling** | Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. |
| **Hygiene measures** | Wash exposed skin thoroughly after handling. |

**Conditions for safe storage, including any incompatibilities**

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| **Storage conditions** | keep only in the original container in a cool, well ventilated place away from incompatible materials, combustible materials. Keep container closed when not in use. |
| **Incompatible products** | Strong bases. Strong reducing agents. Metals. Combustible materials. |
| **Incompatible materials** | Sources of ignition. Direct sunlight. |

## Section VIII – Exposure Controls/Personal Protection

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| **Respiratory** | If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators. |
| **Eyes** | Protective goggles if desired. |
| **Skin** | Rubber, vinyl gloves and boots. |
| **Engineering Controls** | Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn. |
| **Other Work Practices** | Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse. |

## Section IX – Physical and Chemical Properties

**Physical state and appearance**: Liquid.
**Odor**: Odorless.
**Taste**: Slightly acid. Bitter
**Color**: Clear Colorless.
**pH (1% soln/water):** Not available
**Boiling Point:** 108°C (226.4°F)
**Melting Point:** -33°C (-27.4°F)
**Critical Temperature**: Not available.
**Specific Gravity:** 1.1 (Water = 1)
**Vapor Pressure:** 3.1 kPa (@ 20°C)
**Vapor Density:** 1.1 (Air = 1)

**Volatility:** Not available.
**Odor Threshold:** Not available.
**Water/Oil Dist. Coeff.:** Not available.
**Dispersion Properties:** See solubility in water, diethyl ether.
**Solubility:** Easily soluble in cold water. Soluble in diethyl ether.

## Section X – Stability and Reactivity

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| **Reactivity** | Hazardous Polymerization will not occur. |
| **Chemical stability** | Stable under normal circumstances. |
| **Possibility of hazardous reactions** | No data available. |
| **Conditions to avoid** | Extreme heat and contamination. Direct sunlight |
| **Incompatible materials** | Reducing agents, combustible materials. Strong bases. Metals |
| **Hazardous decomposition products** | Oxygen, which supports combustion. |

## Section XI – Toxicological Information

**Routes of Entry**

Absorbed through skin. Eye contact.

**Toxicity to Animals**

Acute oral toxicity (LD50): 6667 mg/kg (Mouse) (Calculated value for the mixture). Acute dermal toxicity (LD50): 6667 mg/kg (pig) (Calculated value for the mixture).

**Chronic Effects on Humans**

CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH [Hydrogen Peroxide]. Classified 3 (Not classifiable for human.) by IARC [Hydrogen Peroxide]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Hydrogen Peroxide]. Mutagenic for bacteria and/or yeast. [Hydrogen Peroxide]. Contains material which may cause damage to the following organs: blood, upper respiratory tract, skin, eyes, central nervous system (CNS).

**Other Toxic Effects on Humans**:

Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of ingestion, of inhalation (lung corrosive).

**Special Remarks on Toxicity to Animals**

Not available.

**Special Remarks on Chronic Effects on Humans**

May cause cancer and may affect genetic material based on animal data. May be tumorigenic. (Hydrogen Peroxide)

**Special Remarks on other Toxic Effects on Humans**

Acute Potential Health Effects: Skin: Causes severe skin irritation and possible burns. Absorption into skin may affect behavior/central nervous system (tremor, ataxia, and convulsions), respiration (dyspnea, pulmonary emboli), and brain. Eyes: Causes severe eye irritation, superficial clouding, corneal edema, and may cause burns. Inhalation: Causes respiratory tract irritation with coughing, lacrimation. May cause chemical burns to the respiratory tract. May affect behavior/Central nervous system (insomnia, headache, ataxia, nervous tremors with numb extremities) and may cause ulceration of nasal tissue, and, chemical pneumonia, unconsciousness, and possible death. At high concentrations, respiratory effects may include acute lung damage, and delayed pulmonary edema. May affect blood. Ingestion: Causes gastrointestinal tract irritation with nausea, vomiting, hypermobility, and diarrhea. Causes gastrointestinal tract burns. May affect cardiovascular system and cause vascular collapse and damage. May affect blood (change in leukocyte count, pigmented or nucleated red blood cells). May cause difficulty in swallowing, stomach distension and possible cerebral swelling. May affect behavior/central nervous system (tetany, excitement). Chronic Potential Health Effects: Prolonged or repeated skin contact may cause dermatitis. Repeated contact may also cause corneal damage. Prolonged or repeated ingestion may affect metabolism (weight loss). Prolonged or repeated inhalation may affect respiration, blood. (Hydrogen Peroxide)

## Section XII – Ecological Information

**Toxicity** No additional information provided for this product.

**Aquatic Ecotoxicity**

| Ingredient | 96 Hr LC50 fish, mg/L | 48hr EC50 Crustacea mg/L | ErC50 algae Mg/L |
|---|---|---|---|
| Hydrogen peroxide (7722-84-1) | 22.00 Oncorhynchus mykiss | 2.32 Daphnia magna | 0.71 (72 hr) Microcystis pulverea |

**Products of Biodegradation** Possibly hazardous short/long term degradation products are to be expected.

**Toxicity of the Products of Biodegradation** The products of degradation are less toxic than the product itself.

**Other information** Avoid release to the environment.

## Section XIII – Disposal Considerations

**Waste disposal recommendations** Waste must be disposed of in safe manner in accordance with federal, state and local environmental control regulations

**Ecology - waste materials** Avoid release to the environment.

## Section XIV – Transport Information

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| **DOT Classification** | CLASS 5.1: Oxidizing material. |
| **Identification** | Hydrogen peroxide, aqueous solution UNNA: 2014 PG: II |
| **Marine Pollutant** | No |

## Section XV – Regulatory Information

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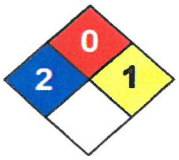
| **Regulatory Overview** | The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. |
| **Toxic Substance Control Act (TSCA)** | All components of this material are either listed or exempt from listing on the TSCA Inventory. |
| **WHMIS Classification (Canada)** | CLASS C: Oxidizing material. CLASS E: Corrosive liquid. CLASS F: Dangerously reactive material |
| **US EPA Tier II Hazards** | Fire: No<br>Sudden Release of Pressure: No<br>Reactive: No<br>Immediate (Acute): Yes<br>Delayed (Chronic): No |
| **EPCRA 311/312 Chemicals and RQs** | There are no chemicals at levels which require reporting under this statute. |
| **EPCRA 302 Extremely Hazardous Toxic Chemicals:** | Hydrogen peroxide EPCRA 313<br>There are no chemicals at levels which require reporting under this statute. |

**HMIS (U.S.A.)**

Health Hazard: 3
Fire Hazard: 0
Reactivity: 1
Personal Protection:


**National Fire Protection Association (U.S.A.)**

Health: 2
Flammability: 0
Reactivity: 1
Specific hazard:



## Section XVI – Other Information

**SDS Number:** M-D6-AVL17
**SDS creation date:** January 19, 2017
**Revised date:** N/A
**Revision due:** Jan 19, 2020

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Alberta Veterinary Laboratories be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alberta Veterinary Laboratories has been advised of the possibility of such damages.

***This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR***