



Dominion Veterinary Laboratories Limited

Quality Animal Health Pharmaceuticals - Dedicated Service Since 1950

1199 Sanford Street - Winnipeg, Manitoba R3E 3A1

Telephone: (204) 589.7361 / 589.7362 - Fax: (204) 943.9612

www.petware.ca

Safety Data Sheet Isopropyl Alcohol (99%)

Date: **November 30, 2023**

1: Identification

Product Name:
Synonyms

Isopropyl Alcohol (99%)

IPA, Isopropanol, Pprpan-2-ol, Propanol, Propyl Alcohol

Recommended Use:

Laboratory, manufacturing and industrial uses

Restricted Uses

No information available

Product Code:

OOL-IPA99

D.I.N.:

N/A

Supplier:

Shelbri Chemical Sales (Division of)
Dominion Veterinary Labs LTD.
1199 Sanford St.
Winnipeg, Manitoba
R3E 3A1
Telephone: (204)-586-3484
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Emergency telephone number :

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 2; H225 Highly flammable liquid and vapour.

Eye Irrit. 2; H319 Causes serious eye irritation.

STOT SE 3; H336 May cause drowsiness or dizziness.

2.2 Label elements

Labelling (CLP)



Signal word: **Danger**

Hazard statements:	H225	Highly flammable liquid and vapour.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness

Precautionary Statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P261 Avoid breathing vapours.

P264 Wash skin thoroughly after handling

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep 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.

P337 + P313 If eye irritation persists, get medical advice/attention.

P370 + P378 In case of fire, use dry sand, dry chemical or alcohol-resistant foam to extinguish

P403+ P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P403 + P235 Store in a well-ventilated place. Keep cool.

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided. Vapours are slightly irritating to mucous membranes.

Higher doses may lead to a narcotic effect.

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

May cause sensitisation especially in sensitive humans.

This substance does not meet the criteria for classification as PBT or vPvB.

Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition / information on ingredients



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3.1 Substances

Chemical characterisation: $\text{CH}_3\text{-CH(OH)CH}_3$

Propan-2-ol, Isopropanol, Isopropyl alcohol (IPA) $\geq 99\%$

CAS-Number: 67-63-0

EC-number: 200-661-7

EU index number: 603-117-00-0

RTECS-Number: NT8050000

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take off immediately all contaminated clothing.

In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Seek medical attention.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water.

Take off immediately all contaminated clothing. If skin irritation occurs: Consult physician immediately.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.

Remove contact lenses, if any. Afterwards, consult an ophthalmologist immediately.

After swallowing: Rinse mouth immediately and drink plenty of water.

Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately get medical attention. Do not give fatty oils and milk.

4.2 Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness. Causes serious eye irritation. Higher doses may lead to a narcotic effect. After resorption: Headache, dizziness, inebriation, unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

Attention in case of vomiting and stomach pumping: danger of aspiration. Accelerate intestinal transit. Rinse mouth immediately and drink plenty of water. Give sodium sulfate as laxative (1 tablespoon in 1 glass of water) with plenty of activated coal. Otherwise, continue with symptomatic treatment.

If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen.

Supervision and correction of circulation, balance of acid-base and electrolyte as well as blood-sugar level. During the after-treatment a diet rich in carbohydrates, proteins and vitamins, poor in fats.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, extinguishing powder, alcohol resistant foam.

In enclosed areas: Carbon dioxide.

Extinguishing media which must not be used for safety reasons: Full water jet

5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. Liquid evaporates quickly.

Vapours are heavier than air and will spread at floorlevel.

Vapours can form explosive mixtures with air. Beware of reignition. In case of fire may be liberated: Carbon monoxide and carbon dioxide. In enclosed areas: Risk of suffocation!

5.3 Advice for firefighters

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Special protective equipment for firefighters: Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Hazchem-Code: 12YE

Use fine water spray to cool endangered containers.

Move undamaged containers from immediate hazard area if it can be done safely.

Heating causes rise in pressure with risk of bursting.

Suppress gases/vapours/mists with water spray jet.

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

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Provide adequate ventilation. Do not breathe vapours. Avoid contact with the substance. Wear appropriate protective equipment. Keep unprotected people away.

Cordon off downwind area at risk and warn inhabitants.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. Risk of explosion if the liquid enters the sewage system. If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Dam spills and pump to remove. Close all lower level rooms. Contact expert.

Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal.

Additional information: Take precautionary measures against static discharges. Use explosion-proof equipment and non-sparking tools/utensils.

In case of spills of large quantities: Seal off endangered area. Restrict access to affected areas. In neighborhoods and industrial areas, warn inhabitants.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide good ventilation and/or an exhaust system in the work area. Use only in well-ventilated areas. Use solvent-resistant equipment. Do not breathe vapours. Avoid contact with skin and eyes. Wear appropriate protective equipment.

Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Take off contaminated clothing. Preventive skin protection.

Precautions against fire and explosion: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. With air, vapours form potentially explosive mixtures, which are heavier than air. In partially filled containers explosive mixtures may form. Use only explosion-protected equipment/instruments. Do not weld.



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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep container tightly closed in a cool, well-ventilated place.

Storage temperature 5 - 25 °C. Protect from heat and direct sunlight

Hints on joint storage: Do not store together with combustible or self-igniting materials or any highly flammable solids.

Keep away from food, drink and animal feedings.

Avoid contact with strong oxidizing agents, strong acids, Alkalis and alkaline earth metals.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

All exposure relevant information (human health and environment) is summarised in annexes to this safety data sheet.

8.1 Control parameters

Occupational exposure limit values:

Type	Limit value
Great Britain: WEL-STEL	1250 mg/m ³ ; 500 ppm
Great Britain: WEL-TWA	999 mg/m ³ ; 400 ppm
Ireland: 15 minutes	400 ppm
Ireland: 8 hours	200 ppm

DNEL/DMEL: DNEL long-term, workers, dermal, systemic: 888 mg/kg/d

DNEL long-term, workers, inhalative, systemic: 500 mg/m³

DNEL long-term, consumers, dermal, systemic: 319 mg/kg/d

DNEL long-term, consumers, inhalative, systemic: 89 mg/m³

DNEL long-term, consumers, oral, systemic: 26 mg/kg/d

PNEC: PNEC water (freshwater): 140.9 mg/L

PNEC water (marine water): 140.9 mg/L

PNEC water (intermittent release): 140.9 mg/L

PNEC sediment: 552 mg/kg

PNEC soil: 28 mg/kg

PNEC sewage treatment plant (stp): 2,251 mg/L PNEC oral: 160 mg/kg food

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Use filter type A (= against vapours of organic substances) according to EN 14387. Or:
Use combination filter type A-P2 or ABEK-P2 according to EN 14387.

Hand protection: Protective gloves according to EN 374.

Glove material:

-Nitrile rubber, layer thickness: (1 mm), breakthrough time: 8 h

-Butyl caoutchouc (butyl rubber), layer thickness: (>=0.5 mm), breakthrough time: 8 h

- Polychloroprene, layer thickness: (>=0.5 mm), breakthrough time: 4 h

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Unsuitable glove material: PVC (polyvinyl chloride), NR (natural rubber, natural latex).

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Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear flame-resistant antistatic protective clothing.

General protection and hygiene measures:

Use solvent-resistant equipment. Avoid contact with skin, eyes, and clothing. Take off immediately all contaminated clothing.

Do not breathe vapours. When using do not eat, drink or smoke.

Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Wash hands before breaks and after work. Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Do not allow to penetrate into soil, waterbodies or drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Form: liquid Colour: colorless
Odour:	alcoholic
Odour threshold:	no data available
pH value:	neutral
Melting point/freezing point:	-89c
Initial boiling point and boiling range:	82C (DIN53171)
Flash point/flash point range:	12 °C (DIN51755)
Evaporation rate:	No data available
Flammability:	Highly flammable liquid and vapour
Explosion limits:	LEL (Lower Explosion Limit): 2.00 Vol-% UEL (Upper Explosive Limit): 12.00 Vol-%
Vapour pressure:	at 20 °C: 42 hPa at 25 °C: 60.2 hPa
Vapour density:	1.05
Density:	at 20 °C: 0.785 g/mL
Water solubility:	at 20 °C: completely miscible
Partition coefficient: n-octanol/water:	at 25 °C: 0.05 log P(o/w) (OECD 107) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Auto-ignition temperature:	425 °C
Decomposition temperature:	No decomposition when used properly.
Viscosity, dynamic:	at 20 °C: 2.5 mPa*s at 25 °C: 2.1 mPa*
Explosive properties:	Not Explosive. Vapours can form explosive mixtures with air
Oxidizing characteristics:	Non Oxidizing

9.2 Other information

Refraction index:	at 20 °C: 1.376-1.378
Additional information:	Molar Mass: 60.11 g/mol

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SECTION 10: Stability and reactivity

10.1 Reactivity

Highly flammable liquid and vapour.
Vapours can form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with strong acids and strong oxidizing agents.
Liquid evaporates quickly. Vapours are heavier than air and will spread at floor level.
Vapours can form explosive mixtures with air. Beware of reignition.
Heating will lead to pressure increase: Danger of bursting and explosion.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Protect from direct exposure to sunlight and temperatures exceeding 35 °C.

10.5 Incompatible materials

Strong acid, strong oxidizing agents, alkaline earth metals, aluminium, iron, amines Reacts at room temperature with alkali, less so with alkaline earth metals (with formation of hydrogen), at higher temperatures a measurably stronger reaction occurs.

10.6 Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide and carbon dioxide.
Thermal decomposition: No decomposition when used properly.

SECTION 11 : Toxicological information

11.1 Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 5840 mg/kg bw (OECD 401)
LD50 Rabbit, dermal: 13900 mg/kg bw (OECD 402)
LC50 Rat, inhalative: > 25 mg/L/6h (OECD 403)

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Based on available data, the classification criteria are not met.
Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.
Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.
Skin sensitisation: Based on available data, the classification criteria are not met. Specific symptoms in animal studies, guinea pig: not sensitising (OECD 406).
Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
Gene-mutations mammalian cells (in-vitro, hamster): Negative (OECD 476).
Bacterial mutagenicity: (in-vitro, Ames test): Negative (OECD 471). Micronucleus test: (in-vivo, Mouse): Negative (OECD 474).
Carcinogenicity: Based on available data, the classification criteria are not met.

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Reproductive toxicity: Based on available data, the classification criteria are not met.
Effects on or via lactation: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure): STOT SE 3; H336 = May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Symptoms

In case of inhalation: After resorption: Headache, dizziness, inebriation, unconsciousness.
High concentrations of vapours irritate the eyes and mucous membranes.
In case of ingestion:
Nausea, vomiting, abdominal pain, gastrointestinal complaints, blood pressure drop.
After intake of large amounts: unconsciousness, coma, breathing paralysis (death). if swallowed or in the event of vomiting, risk of entering the lungs. Absorption can lead to kidney and liver damage.
After contact with skin:
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Toxic effect on fishes and plankton.
Algae toxicity:
EC50 Green algae: 1,800 mg/L/7d
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 10,000 mg/L/48h.
Fish toxicity:
LC50 Pimephales promelas (fathead minnow): 9,640 mg/L/96h.

Further details: Toxicity to terrestrial plants:
IC50 Lactuca sativa: 2,104 mg/kg/3d.

12.2 Persistence and degradability

Further details: Product is readily biodegradable.

Oxygen demand: BOD 5: 53%
ThOD: 72%

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):
Bio-accumulation is not to be expected ($\log P(o/w) < 1$).

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 01 04* = other organic solvents, washing liquids and mother liquors * = Evidence for disposal must be provided.

Recommendation: In accordance with regulations for special waste, must be taken after pretreatment to an authorized special waste disposal site or incineration plant.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR: UN 1219

14.2 UN proper shipping name

ADR/RID, IMDG: UN 1219, ISOPROPANOL (ISOPROPYL ALCOHOL)
IATA-DGR: UN 1219, ISOPROPANOL

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: FI
IMDG: Class 3, Subrisk
IATA-DGR: Class 3

14.4 Packing group

ADR/RID, IMDG, IATA-DGR: II

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 33, UN number UN 1219
Hazard label: 3

Sea transport (IMDG)

EmS: F-E, S-D
Segregation group: none

Air transport (IATA)

Hazard label: Flamm. Liquid



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14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Vessel type: -

pollution category: Z

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: !2YE

No data available

National regulations - EC member states

Volatile organic compounds (VOC):

100 % by weight = 780 g/L

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out

SECTION 16: Other information

Further information

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

OEL: Occupational Exposure Limit Value

AS/NZS: Australian Standards/New Zealand Standards

BOD: Biochemical oxygen demand

CAS: Chemical Abstracts Service

CFR: Code of Federal Regulations

CLP: Classification, Labelling and Packaging

DMEL: Derived minimal effect level

DNEL: Derived no-effect level

EC50: Effective Concentration 50%

ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals

EC: European Community EN: European Standard

EU: European Union

IATA: International Air Transport Association

IBC: Intermediate Bulk Container

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC50: Inhibition Concentration 50%

IMDG Code: International Maritime Dangerous Goods Code

LC50: Median lethal concentration

LD50: Lethal dose 50%

MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships

OSHA: Occupational Safety and Health Administration

PBT: Persistent, bioaccumulative and toxic

PNEC: Predicted no-effect concentration

PVC: Polyvinyl chloride

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

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RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail SDS: safety Data Sheet

STOT SE: Specific target organ toxicity - single exposure

ThOD: Theoretical Oxygen Demand

ThOD: Theoretical Oxygen Demand

TLV: Threshold Limit Value

TRA: Targeted Risk Assessment

UV: Ultraviolet

vPvB: Very persistent and very bioaccumulative

WEL: Workplace Exposure Limit

Preparation Date: 03/15/96

Revision Date: 11/30/22

Issued By: Dominion Vet Labs. Ltd.

Carol Lamirande/Office Manager

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