SAFETY DATA SHEETS

This SDS packet was issued with item:

078924372

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078924370 078924371

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 03.29.2021

Triodine-7™

SECTION 1: Identification

Product identifier

Product name: Triodine-7™

Product code: 14129311, 21269218, 16513456, 11117731

Recommended use of the product and restriction on use

Relevant identified uses: Topical Antiseptic / Disinfectant

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Supplier:

United States

Aspen Veterinary Resources Ltd
3155 W. Heartland Drive
Liberty, MO 64068
1-800-792-1238

Emergency telephone number:

United States

CHEMTREC
Within USA and Canada: 1-800-424-9300 (24 hours)
Outside USA and Canada: +1-703-527-3887 (24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Serious eye damage, category 1
Flammable liquids, category 3
Specific target organ toxicity - single exposure, category 3, narcotic effects
Specific target organ toxicity - repeated exposure, category 1

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H226 Flammable liquid and vapor
H318 Causes serious eye damage
H336 May cause drowsiness or dizziness
H372 Causes damage to thyroid gland through prolonged or repeated exposure

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/protective clothing/eye protection/face protection
P370+P378 In case of fire: Use agents recommended in Section 5 to extinguish.
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/physician.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P314 Get medical advice/attention if you feel unwell
P403+P235 Store in a well-ventilated place. Keep cool
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P405 Store locked up
P501 Dispose of contents/container in accordance with local, national, regional and international regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Water	60-72
CAS number: 67-63-0	Isopropyl alcohol	20-30
CAS number: 57-55-6	Propylene glycol	5-10
CAS number: 25655-41-8	Polyvinylpyrrolidone iodine	1-4
CAS number: 7553-56-2	Iodine	1-2.2
CAS number: 7681-11-0	Potassium iodide	1-2

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After eye contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Product is flammable. Exposure to sources of ignition may cause physical injury.

Inhalation may have adverse effects on the central nervous system. Symptoms may include drowsiness, dizziness, headache, nausea and lowering of consciousness. Acute overexposure via inhalation may result in respiratory distress, confusion and unconsciousness.

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Immediate medical attention and special treatment

Specific treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Skin/eye burns require immediate treatment.

Overexposure via inhalation requires urgent medical treatment.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Dry chemical, CO2, water spray or alcohol-resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Flammable liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will

spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Evacuate non-essential personnel. Ventilate closed spaces before entering. Consider initial evacuation for 300 meters in all directions. If tank/rail car is involved in the fire, ISOLATE for 800 meters in all directions. Fight fire from a maximum distance. Move containers from fire area if you can do it without risk. Use water spray/fog for cooling fire exposed containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Stand by, at a safe distance, with extinguisher ready for possible re-ignition. A vapor-suppressing foam may be used to reduce vapors. Avoid unnecessary run-off of extinguishing media which may cause pollution. Do not handle damaged containers unless specialized to do so.

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. All equipment used when handling the product must be grounded. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

Precautions for safe handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges. Handle containers with caution. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Isopropyl alcohol	67-63-0	15-Minute STEL: 400 ppm
	Isopropyl alcohol	67-63-0	8-Hour TWA: 200 ppm
	Iodine	7553-56-2	8-Hour TWA: 0.01 ppm (inhalable fraction and vapor)
	Iodine	7553-56-2	15-Minute STEL: 0.1 ppm (vapor fraction)
	Potassium iodide	7681-11-0	8-Hour TWA: 0.01 ppm
NIOSH	Isopropyl alcohol	67-63-0	IDLH: 2000 ppm
	Isopropyl alcohol	67-63-0	15-Minute STEL: 500 ppm (1,225 mg/m³)
	Isopropyl alcohol	67-63-0	REL-TWA: 400 ppm (980 mg/m³ - up to 10 hrs.)
	Iodine	7553-56-2	IDLH: 2 ppm
	Iodine	7553-56-2	Ceiling Limit: 1 mg/m³ (0.1 ppm)
OSHA	Isopropyl alcohol	67-63-0	8-Hour TWA-PEL: 400 ppm (OSHA PEL TWA 980 mg/m³)
	Iodine	7553-56-2	Ceiling Limit: 1 mg/m³ (0.1 ppm)
United States(California)	Isopropyl alcohol	67-63-0	8-Hour TWA-PEL: 980 mg/m³ (400 ppm - Cal/OSHA)
	Isopropyl alcohol	67-63-0	15-Minute STEL: 1225 mg/m³ (500 ppm - Cal/OSHA)
	Iodine	7553-56-2	Ceiling Limit: 1 mg/m³ (0.1 ppm)
WEEL	Propylene glycol	57-55-6	8-Hour TWA: 10 mg/m³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before

handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Dark brown liquid
Odor	Iodine odor
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	23 °F (-6 °C)
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Flammable
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Miscible in water
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Specific gravity	1.02
Weight per gallon	8.5 Lbs/gal (3.9 kg/gal.)
VOC g/l / Lb/gal	203.7 g/l – 311.5 g/l (1.7 Lbs/gal – 2.6 Lbs/gal)

SECTION 10: Stability and reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical stability:

Stable under recommended handling and storage conditions.

Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources, static electricity and incompatible materials. Vapor accumulation in low or confined areas.

Incompatible materials:

Strong acids, aldehydes, amines.

Hazardous decomposition products:

Toxic gases (carbon dioxide and carbon monoxide).

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Isopropyl alcohol	oral	LD50 Rabbit: 6410 mg/kg
	dermal	LD50 Rabbit: 12,800 mg/kg
	inhalation	LC50 Rat: 72.6 mg/L (4 hr)
Propylene glycol	oral	LD50 Rat: 21000 - 33700 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
Polyvinylpyrrolidone iodine	oral	LD50 Rat: 8000 mg/kg
Iodine	inhalation	LC50 Rat: 4.588 mg/L (4 hours, dust)
	dermal	LD50 Rabbit: 1425 mg/kg

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Polyvinylpyrrolidone iodine	Causes skin irritation.
Iodine	Causes skin irritation.

Serious eye damage/irritation

Assessment:

Causes serious eye damage.

Product data:

No data available.

Substance data:

Name	Result
Isopropyl alcohol	Causes serious eye irritation.
Polyvinylpyrrolidone iodine	Causes serious eye damage.
Iodine	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Isopropyl alcohol	Group 3

National Toxicology Program (NTP): None of the ingredients are listed.

OSHA Carcinogens: Not applicable

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment:

May cause drowsiness or dizziness.

Product data:

No data available.

Substance data:

Name	Result
Isopropyl alcohol	May cause drowsiness or dizziness.
Iodine	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data:

Name	Result
Iodine	May cause damage to thyroid gland through repeated or prolonged exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment:

Harmful to aquatic life.

Product data: No data available.

Substance data:

Name	Result
Propylene glycol	EC50 Daphnia magna: 43500 mg/L (48 hr)
	LC50 Oncorhynchus mykiss: 40613 mg/L (96 hr)
Iodine	LC50 Oncorhynchus mykiss: 1.67 mg/L (96 hours)
	EC50 Daphnia magna: 0.55 mg/L (48 hours)
	EC50 Desmodesmus subspicatus: 0.13 mg/L (72 hours)

Chronic (long-term) toxicity

Assessment:

Harmful to aquatic life with long lasting effects.

Product data: No data available.

Substance data:

Name	Result
Propylene glycol	EC50 Selenastrum capricornutum: 18100 mg/L (14 days)

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Isopropyl alcohol	Readily biodegradable in water.
Propylene glycol	Readily biodegradable (80% degradation in 28 days).
Potassium iodide	Biodegradation is not applicable for inorganic substances.

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Isopropyl alcohol	Not expected to bioaccumulate (log Kow: 0.05).
Propylene glycol	Low potential for bioaccumulation (BCF: 0.09).
Iodine	Log Kow: 2.49
Potassium iodide	This substance is not likely to bioaccumulate.

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Iodine	Koc at 20 °C: 1.64
Potassium iodide	The substance can be expected to have a low potential for adsorption.

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Isopropyl alcohol	This substance is not PBT.
Propylene glycol	The substance is not PBT.
Potassium iodide	PBT assessment does not apply to this substance.

vPvB assessment:

Isopropyl alcohol	This substance is not vPvB.
Propylene glycol	The substance is not vPvB.
Potassium iodide	vPvB assessment does not apply to this substance.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	UN1219
UN proper shipping name	Isopropyl alcohol
UN transport hazard class(es)	3 
Packing group	II
Environmental hazards	None
Special precautions for user	None
Passenger air/rail	5 L
Cargo aircraft only	60 L
Stowage category	B

International Maritime Dangerous Goods (IMDG)

UN number	UN1219
UN proper shipping name	Isopropyl alcohol
UN transport hazard class(es)	3 

Packing group	II
Environmental hazards	None
Special precautions for user	None
EMS number	F-E, S-D
Stowage category	B
Excepted quantities	E2
Limited quantity	1 L

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN1219
UN proper shipping name	Isopropyl Alcohol
UN transport hazard class(es)	3 
Packing group	II
Environmental hazards	None
Special precautions for user	None
ERG code	3L
Excepted quantities	E2
Passenger and cargo	5 L
Cargo aircraft only	60 L
Limited quantity	1 L

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 313 toxic chemicals:

67-63-0	Isopropyl alcohol	Listed

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

67-63-0	Isopropyl alcohol	Listed
7553-56-2	Iodine	Listed

New Jersey Right to Know:

67-63-0	Isopropyl alcohol	Listed
57-55-6	Propylene glycol	Listed
7553-56-2	Iodine	Listed

New York Right to Know:

67-63-0	Isopropyl alcohol	Listed

7553-56-2	Iodine	Listed

Pennsylvania Right to Know:

67-63-0	Isopropyl alcohol	Listed
57-55-6	Propylene glycol	Listed
7553-56-2	Iodine	Listed

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 3-2-0

HMIS: 3*-2-0

Initial preparation date: 03.29.2021

End of Safety Data Sheet