



411 – 19 Street, S. E. Calgary, AB., Canada.  
T2E 6J7

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**Product identifier/Trade name:** IVERMECTIN POUR-ON FOR CATTLE

**Product code/Internal Identification:** DIN 02248033

**Product use/Description:** Endectocide in 5 L, 10L and 20 L plastic containers.

**Product chemical name:** N/Ap

**Chemical family:** N/Ap

**MSDS preparation/review date:** August 25, 2008/Sept 23, 2011

**Supplier identifier:** Alberta Veterinary Laboratories (AVL)  
411 – 19<sup>th</sup> Street SE, Calgary, Alberta T2E 6J7 Tel. (403) 556-2245

**Emergency phone number:** (613) 996-6666 (CANUTEC)  
1-800 463-5060 OR  
(418) 656-8090 (CONTROL POISON CENTER)

**Manufacturer identifier:** Chief Medical Supplies Ltd  
411 – 19<sup>th</sup> Street SE, Calgary, Alberta T2E 6J7 Tel. (403) 556-2245

**Emergency phone number:** Same as supplier

**WHMIS Classification:** Refer to Section 15.

<b>SECTION 2 - CHEMICAL COMPOSITION / HAZARDOUS INGREDIENTS</b>
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<b>Hazardous Ingredients</b>	<b>CAS #</b>	<b>% (weight)</b>	<b>LD<sub>50</sub> (route, species)</b>	<b>LC<sub>50</sub> (species)</b>
Ivermectin	69-52-3	0.5	25 mg/kg (oral, mouse) 50 mg/kg (oral, rat) > 660 mg/kg (dermal, rat)	N/Av
Isopropyl alcohol (Isopropanol)	67-63-0	60-100	5840 mg/kg (oral, female rat)	17000 ppm 4 hours (rat)

### SECTION 3 - HAZARDS IDENTIFICATION

#### Emergency Overview

FLAMMABLE LIQUID AND VAPOUR. Vapour is heavier than air and may spread long distances. Distant ignition and flashback are possible. During a fire, irritating/toxic smoke and fumes may be generated. Mild central nervous system depressant. High vapour concentrations may cause headache, nausea, dizziness, drowsiness, incoordination, and confusion. Higher exposures may result in unconsciousness and death. May be irritating to the respiratory tract. EYE IRRITANT. Causes eye irritation. POSSIBLE REPRODUCTIVE HAZARD - may cause harmful effects to the fetus, based on laboratory animal evidence. Aspiration hazard. Swallowing or vomiting of the liquid may cause aspiration (breathing) into the lungs.

**POTENTIAL HEALTH EFFECTS** (for more details, refer to Section 11)

**Primary entry route(s):**

Skin, eye, ingestion and inhalation.

**Effects of short-term (acute) and long-term (chronic) exposure:**

***Inhalation:***

May cause central nervous system (CNS) depression. May cause headache, nausea, dizziness, drowsiness, incoordination and confusion. High exposures may result in unconsciousness and death. May be irritating to the respiratory tract.

***Skin:***

May cause a mild irritation.

***Eye:***

Product is a moderate to severe eye irritant.

***Ingestion:***

Ingestion of large quantities of this product may be harmful. Aspiration hazard. Swallowing or vomiting of the liquid may cause aspiration (breathing) into the lungs.

### SECTION 4 - FIRST AID MEASURES

**Inhalation:**

Remove source of contamination or have victim move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention immediately.

**Skin contact:**

Flush contaminated area with lukewarm, gently running water for at least 5 minutes or until the chemical is removed. Under running water, remove contaminated clothing. If irritation persists, obtain medical advice. Completely decontaminate clothing before reuse or discard.

**Eye contact:**

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 20 minutes, or until the chemical is removed, while holding the eyelid(s) open. Obtain medical attention immediately.

**Ingestion:**

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink two glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Obtain medical attention immediately.

## SECTION 5 - FIRE FIGHTING MEASURES

### Fire hazards/conditions of flammability:

Flammable liquid. Can readily form explosive mixtures with air at room temperature. Vapour is heavier than air and may travel a considerable distance to a source of ignition and flash back to a leak or open container. Distant ignition and flashback are possible.

**Flash point (Method):** 14° C (57,2° F) (closed cup)

**Lower flammable limit (% by volume):** N/Av

**Upper flammable limit (% by volume):** N/Av

**Sensitivity to mechanical impact:** Probably not sensitive. Stable material.

### Sensitivity to static discharge:

Product will not accumulate static charge since it has a high electrical conductivity. Mixtures of vapour and air at concentrations in the flammable range may be ignited by a static discharge of sufficient energy.

**Auto-ignition temperature:** ~ 399° C (750° F)

### Suitable extinguishing media:

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

### Special fire-fighting procedures/equipment:

During a fire, irritating/toxic smoke and fumes may be generated. Vapours can accumulate in confined spaces, resulting in a toxicity and flammability hazard. A self-contained breathing apparatus is required for fire-fighting personnel to protect themselves from toxic products produced during the combustion. Closed containers may explode with the pressure building from the heat. Use water to cool fire exposed containers and prevent this situation.

### Hazardous combustion products:

Carbon oxides and other irritant gases, which may include unburned alcohol and toxic constituents.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Personal precautions:

FLAMMABLE. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Remove all ignition sources. Remove or isolate flammable and combustible materials. Wear adequate personal protective equipment (See Section 8). Ventilate area.

### Spill response/Cleanup:

Stop the flow if it can be done safely. Keep materials which can burn away from spilled material. Prevent material from entering waterways, sewers or confined spaces. **SMALL SPILLS:** Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labelled containers. Flush area with water. **LARGE SPILLS:** Contain spill with earth, sand, or absorbent material which does not react with spilled material. Remove liquid by explosion-proof pumps or vacuum equipment. Place in suitable, covered, labelled containers. Contact fire and emergency services and supplier for advice. Contaminated absorbent material may pose the same hazards as the spilled product.

### Environmental precautions:

For large spills, notify government occupational health and safety and environmental authorities. Confine spill, preventing it from entering sewer lines or waterways. Dispose of as per local, state and federal regulations.

## SECTION 7 - HANDLING AND STORAGE

### Safe handling procedures:

FLAMMABLE, POSSIBLE REPRODUCTIVE HAZARD and EYE IRRITANT. Before handling, it is very important that engineering controls are operating and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Ground all drums, transfer vessels, hoses and piping. Do not use near welding operations, flames or hot surfaces. Use in a well-ventilated area. Avoid generating vapours or mists. Inspect containers for leaks before handling. Never return contaminated material to its original container. Label containers appropriately. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous. Do not use with incompatible materials such as strong oxidizing agents.

### Storage requirements:

Store in a cool, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Keep storage area clear of ignition sources. Store away from incompatible materials such as strong oxidizers. If stored at temperatures below 0°C (32°F), this product may appear cloudy. Allowing it to warm at room temperature will restore the normal appearance without affecting efficacy. Inspect all incoming containers to make sure they are properly labelled and not damaged. Store in suitable, labelled containers. Keep containers tightly closed. Empty containers may contain hazardous residues. Keep closed. Bond and ground metal containers in storage area. Keep absorbents for leaks and spills readily available. Storage facilities should be made of fire resistant materials. For large-scale storage, use a grounded, non-sparking ventilation system, approved explosion-proof equipment and intrinsically safe electrical systems. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Engineering controls:

Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits.

### Respiratory Protection:

Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirator if the exposure limits are unknown.

### Protective Clothing/Equipment:

Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective chemical safety goggles or in a splash environment in combination with a face shield. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area. Separate contaminated work clothes from street clothes. Launder before reuse.

### Comments:

Avoid contact with skin and eyes. Avoid breathing vapours or mists. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state, colour and odour:</b>	Blue liquid with an alcohol odour.
<b>Odour threshold:</b>	N/Av
<b>pH :</b>	N/Av
<b>Boiling point:</b>	N/Av
<b>Melting/freezing point:</b>	N/Av
<b>Vapour pressure:</b>	33.1 mm Hg at 20° C (for Isopropanol)

<b>Solubility in water:</b>	Complete
<b>Coefficient of oil/water distribution:</b>	N/Av
<b>Specific gravity or density (water = 1, at 4 °C):</b>	0.786 at 20° C
<b>Vapour density:</b>	Heavier than air
<b>Evaporation rate:</b>	~ 1.5 (butyl acetate = 1)
<b>% volatile by volume:</b>	N/Av

#### SECTION 10 - REACTIVITY AND STABILITY DATA

**Stability and reactivity:**

Stable at room temperature, in normal handling and storage conditions.

**Polymerisation:** Hazardous polymerisation will not occur.

**Conditions to avoid:**

Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, ALUMINIUM, ... Keep away from ignition sources.

**Materials to avoid:**

Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, ALUMINIUM, ...

**Hazardous decomposition products:**

Unstable peroxides.

#### SECTION 11 - TOXICOLOGICAL INFORMATION

**Exposure limits:**

Ingredient

Ingredient	OSHA PEL		ACGIH TLV		Other exposure limits
	TWA	STEL	TWA	STEL	
Ivermectin	N/Av	N/Av	N/Av	N/Av	N/Av
Isopropyl alcohol	400 ppm	500 ppm	400 ppm	500 ppm	N/Av

**For more details, refer to Section 3.**

**Carcinogenicity:**

No ingredient listed by IARC, ACGIH, NTP and OSHA as a carcinogen.

**Teratogenicity, mutagenicity, other reproductive effects:**

POSSIBLE REPRODUCTIVE HAZARD - may cause harmful effects to the fetus, based on laboratory animal evidence.

**Skin sensitization:**

N/Av

**Respiratory tract sensitization:**

N/Av

**Synergistic materials:**

Isopropyl alcohol can enhanced the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene, and dimethylnitrosamine.

<b>SECTION 12 - ECOLOGICAL INFORMATION</b>
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**Environmental effects:** N/Av

**Important environmental characteristics:** N/Av

**Aquatic toxicity:** N/Av for this product. Ivermectin is harmful to aquatic life.

<b>SECTION 13 - WASTE DISPOSAL</b>
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**Handling and storage conditions for disposal:**

Store material for disposal as indicated in Handling and Storage (Section 7).

**Methods of disposal:**

Review federal, provincial and local government requirements prior to disposal.

<b>SECTION 14 - TRANSPORTATION INFORMATION</b>
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**Transportation of Dangerous Goods (TDG) :**

*Shipping description:* This product is regulated according to those Regulations.

Proper shipping name: ISOPROPYL ALCOHOL or ISOPROPANOL

Class: 3

Identification number: UN1219

Packing group: II

Special case: This product may be shipped in accordance with TDG Section 1.17 as a LIMITED QUANTITY if each inner container does not exceed 1 L.

<b>SECTION 15 - REGULATORY INFORMATION</b>
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**In Canada****WHMIS information:**

Product is regulated according to the Food and Drugs Act and is exempted from the Controlled Product Regulation (CPR) in Canada.

**Hazardous Materials Identification System (HMIS):**

HEALTH: 1 FLAMMABILITY: 3 REACTIVITY: 0

PERSONAL PROTECTION: Section 8.

HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe

**National Fire Protection Association (NFPA):**

HEALTH: 1 FLAMMABILITY: 3 REACTIVITY: 0

PERSONAL PROTECTION: Section 8.

HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe