



# MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

### MATERIAL SAFETY DATA SHEET

<b>SECTION 1 – PRODUCT IDENTIFICATION AND USE</b>			
MANUFACTURER'S NAME:	BIMEDA, INC.	SUPPLIER'S NAME:	BIMEDA, INC.
STREET ADDRESS:	291 FOREST PRAIRIE ROAD	STREET ADDRESS:	291 FOREST PRAIRIE ROAD
CITY AND PROVINCE:	LE SUEUR, MINNESOTA	CITY AND PROVINCE:	LE SUEUR, MINNESOTA
POSTAL CODE:	56058	POSTAL CODE:	56058
TELEPHONE #	507-665-3316	TELEPHONE #	507-665-3316
CHEMICAL NAME:	Ivermectin	CHEMICAL FAMILY:	Antiparasitic
		CHEMICAL FORMULA:	B1a(C48H74O14; B1b(C47H72O14)
PRODUCT USE:	Cattle		
<b>SECTION 2 – HAZARDOUS INGREDIENTS</b>			
HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	PRODUCT IDENTIFICATION NUMBER (PIN)
Ivermectin	0.5 %	70288-86-7	
Isopropyl Alcohol	80.0 %	67-63-0	UN1219
<b>SECTION 3 – PHYSICAL DATA</b>			
PHYSICAL STATE:	ODOUR AND APPEARANCE:		ODOUR THRESHOLD (ppm):
Liquid	Clear blue solution. Isopropyl Alcohol odor is present.		
VAPOR PRESSURE at 20°C (68°F)(mm Hg):	VAPOR DENSITY (Air = 1):		EVAPORATION RATE (Ether = 1):
0.784 hPa (1mm Hg)	N/A		N/A
BOILING POINT (DEG.C):	FREEZING POINT (DEG. C):		IGNITION TEMPERATURE:
180.5°F / 82.5°C	-88°C/-126°F		425.0°C (797°F)
pH (100%):	SPECIFIC GRAVITY (H2O = 1):	SOLUBILITY IN WATER:	FLASHPOINT:
N/A	0.78-0.79 at 20°C/68°F	Not Miscible	12°C/54°F
<b>SECTION 4 – FIRE AND EXPLOSION DATA</b>			
FLAMMABLE:			
IF YES, UNDER WHICH CONDITIONS:			
Irritant and Highly Flammable. Avoid open flames, sparks, any source of heat or ignition, and smoking.			
MEANS OF EXTINCTION: Carbon dioxide, sand, extinguishing powder. Water is an unsuitable extinguishing agent.			
Firefighters should wear self-contained breathing apparatus and full protective equipment.			
SPECIAL HAZARDS CAUSED BY MATERIAL, ITS PRODUCT OF COMBUSTION OR RESULTING GASES: Isopropanol alcohol will not burn or ignite under normal usage, but it is a dangerous fire hazard and a moderate explosion hazard when exposed to heat, flames or oxidizers. Vapors are heavier than air and may travel a considerable distance to an ignition source and flashback.			
FLASHPOINT (Deg. C) AND METHOD:	UPPER FLAMMABLE LIMIT (% BY VOLUME):		LOWER FLAMMABLE LIMIT (% BY VOLUME):
12°C/(54°F)	N/A		2.5% v/v
AUTOIGNITION TEMPERATURE (DEG. C):	HAZARDOUS COMBUSTION PRODUCTS		
Product is not self-igniting	Carbon Oxides, and other irritant gases, which may include unburned alcohol and toxic constituents.		
SENSITIVITY TO IMPACT:	SENSITIVITY TO STATIC DISCHARGE:		
Non-Sensitive. Stable material.	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 or sufficient energy.		

**SECTION 5 – REACTIVITY DATA**

CHEMICAL STABILITY – (IF NO, UNDER WHICH CONDITIONS?)

Stable

INCOMPATIBILITY WITH OTHER SUBSTANCES (IF YES, WHICH ONES?)

No dangerous reactions known.

REACTIVITY, AND UNDER WHAT CONDITIONS?

May emit toxic fumes under fire conditions. (NO<sub>x</sub>, CO<sub>x</sub>, CO). Do not breathe fumes. Vapors pose an explosion risk.

HAZARDOUS DECOMPOSITION PRODUCTS:

Toxic Fumes of: NO<sub>x</sub>, CO<sub>x</sub>, and CO. May emit toxic fumes under fire conditions. In case of fire do not breathe fumes.**SECTION 6 – TOXICOLOGICAL PROPERTIES**

Acute Toxicity

Isopropanol		
Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rabbit)
Inhalative	LC50/4 h	30mg/1 (rat)
Ivermectin		
Oral	LD Oral LD50	>15mg/kg (adult human) ~80mg/kg (dogs) 25mg/kg (mouse) 50mg/kg (rat) >24mg/kg (Rhesus monkey)
Dermal	LD50	406mg/kg (rabbit) >660mg/kg (rat)
Inhalative	LC50/4h LD Subcutaneous LD50 Intraperitoneal LD50 Subcutaneous	>0.4mg/kg (rat) >1.6mg/kg (adult human) 55mg/kg (rat) ~10mg/kg (juvenile dog)

Sensitizing Capability: None Known

Reproductive Effects: None Known

**SECTION 7 – PREVENTATIVE MEASURES**

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (Specify): Not required under normal conditions of use.	RESPIRATOR (Specify): Use suitable respiratory protective device when aerosol or mist is formed.	EYES (Specify): Tightly sealed goggles
FOOTWEAR (Specify): Rubber Boots	CLOTHING (Specify): Impervious protective clothing.	OTHER (Specify): Do not eat, drink, smoke or inhale. Do not store food in working area.

LEAK AND SPILL PROCEDURES: Wear protective clothing, gloves and face/eye protection. Provide adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Do not flush with water or aqueous cleansing agents. Do not allow product to reach sewage system or any other water course.

WASTE DISPOSAL: The product and it's container must be disposed of as hazardous waste as per local, state or federal regulations.

STORAGE AND HANDLING REQUIREMENTS: Store in cool, dry place in tightly closed containers. Handle with care. Avoid jolting and impact. Use only in well ventilated areas. Wash hands thoroughly after handling. Keep away from foodstuffs and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes and skin.

Recommended storage temperature: &lt;30°C (86°F)

**SECTION 8 – FIRST AID MEASURES:**

General:	Involve a doctor immediately.
Eyes:	Rinse opened eye for a minimum of 15 minutes under running water. Get medical attention immediately.
Skin:	Immediately wash with water and soap and rinse thoroughly. If skin irritation occurs, consult a doctor.
Ingestion:	Do not induce vomiting; call a physician or Poison Control Center.
Inhalation:	Remove person to fresh air. Seek immediate medical advice.
Prolonged Contact:	Prolonged contact may cause skin irritation and/or drying and cracking of the skin, nausea, headache and mild narcosis. If ingested, decreased activity, slow rate of breathing, dilation of the pupils, muscle tremors and in-coordination may occur.

ROUTE OF ENTRY: Inhalation, Skin, Eyes, Ingestion

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: No sensitization effects known.

**SECTION 9 – TRANSPORT INFORMATION**

DOT Regulations

Hazard Class:	Identification Number:	Packaging Group:	Proper Shipping Name (technical name):	Label:
3	UN1219	II	Isopropanol (Isopropyl Alcohol)	3
<b>Land Transport ADR/RID (Cross-border)</b>				
<u>ADR/RID Class:</u>	<u>Danger Code: (Kemler):</u>	<u>UN-Number</u>	<u>Packaging Group</u>	<u>Proper Shipping Name:</u>
3 Flammable Liquids	33	1219	II	1219 Isopropanol (Isopropyl Alcohol)
US Emergency Response Number			Chemtrech	1-800-424-9300
<b>SECTION 10 – PREPARATION DATA</b>				
DATE:	08-05-2010	TELEPHONE NUMBER:	519-654-8000	
DATE REVISED:				

Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of the supplier, it is assumed that user of this material has been fully trained according to the mandatory requirements of WHMIS. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this form. If user requires independent information on ingredients in this or any other material, we recommend contact supplier.