

SAFETY DATA SHEETS

This SDS packet was issued with item:

078801927

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078801919

Merck AgVet

IVOMEC DRENCH FOR SHEEP

MANUFACTURER'S NAME: MERCK AGVET DIVISION
P.O. BOX 2000
RAHWAY, NJ 07065
EMERGENCY TELEPHONE NUMBERS: 1-800-854-6588
1-908-750-2380
PRODUCT NAME: Ivomec Drench For Sheep
PLANT MSDS CODE: AG-045

SECTION 1 - MATERIAL IDENTIFICATION

CHEMICAL NAME: Theoretical mixture of 80% (minimum) 22.23 dihydro C-076 Bla and 20% (maximum) 22.23- dihydro C-076 Blb.
TRADE NAME: Ivomec Drench for Sheep
SYNONYMS: None
MERCK ID CODE: 41264/68
CHEMICAL CLASSIFICATION: Avermectins
INTENDED USE: For the treatment of parasitic infestations associated with internal nematodes and nose bots in sheep.

SECTION 2 - PRINCIPAL HAZARDOUS COMPONENT(S)

Component CAS Number	Molecular Formula	Molecular Weight	Percent (%)
Ivermectin Comp. Bla	C48H74O14	875	0.08
Comp. Blb	C47H72O14	861	
70288-86-7 (Mixture)			
Propylene Glycol	C3H8O2	76.09	20.00
57-55-6			
Sodium Phosphate	H2NaO4P	120	1.20
Monobasic Monohydrate			
7558-80-7			
Water Purified	H2O	18.016	66.22
7732-18-5			
Benzyl Alcohol	C7H8O	108.13	3.00
100-51-6			
Inert Ingredients	Not	Not	9.50
Not available.	available.	available.	

SECTION 3 - PHYSICAL PROPERTY DATA

APPEARANCE: Pale yellow free-flowing solution.
ODOR/THRESHOLD LEVEL (ppm): Practically odorless.
BOILING POINT (deg C/deg F): Not established
FREEZING POINT (deg C/deg F): Not established
MELTING RANGE (deg C/deg F): Not applicable
pH: 5.6 - 6.6 at 25 deg C
SOLUBILITY IN WATER: Not established
SPECIFIC GRAVITY (Water=1): Not established
VAPOR DENSITY (Air=1): Not established
VAPOR PRESSURE (mm Hg @ deg C/deg F): Not established
VOLATILE COMPONENTS (% w/w): Not established

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (deg C/deg F): Not established
FLASH POINT TEST METHOD: Not applicable
AUTOIGNITION TEMPERATURE (deg C/deg F): Not established
FLAMMABLE LIMITS:
LEL (%): Not available
UEL (%): Not available
EXTINGUISHING MEDIA: Water fog, alcohol foam, CO2, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Not available
FIRE AND EXPLOSION HAZARDS: Not available
HAZARDOUS DECOMPOSITION PRODUCTS RESULTING FROM A FIRE: Not available

SECTION 5 - REACTIVITY DATA

STABILITY: Stable under normal storage.
STORAGE CONDITIONS TO AVOID: None known
INCOMPATIBILITIES: Oxidizing material
HAZARDOUS POLYMERIZATIONS: Not established

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with plenty of water.
SKIN CONTACT: Wash with soap and water.
INHALATION: Remove from contaminated area immediately. Get medical attention.
INGESTION: If accidentally ingested, get medical attention immediately.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

SECTION 7 - HEALTH HAZARD DATA

Component	OSHA Permissible Exposure Limit (PEL)	ACGIH-1991-92 Threshold Limit Value (TLV)	Merck Exposure Control Limit (ECL)
-----------	---	--	--

Ivermectin Not established Not established 0.08 mg/m3

CARCINOGEN DESIGNATION: Not listed as a carcinogen with NTP, IARC, or OSHA.

EFFECTS OF ACUTE EXPOSURE:

EYE CONTACT: Direct contact with eyes can cause irritation.

SKIN CONTACT: Ivermectin is nonirritating in animal studies. Although skin absorption of this formulation of Ivermectin is not established, it has been shown that less than 1% of the closely related compound abamectin is absorbed through the skin of rhesus monkeys when it is applied as emulsifiable concentrate or suspended in alcohol.

INHALATION: No toxicity has been observed by this route of exposure to Ivermectin.

INGESTION: Pure Ivermectin is considered highly toxic in acute animal studies. The acute oral toxicity of Ivermectin have shown clear differences among species in sensitivity to Ivermectin toxicity. Rodents are uniquely sensitive compared to the other species in which the compound has been tested. It is therefore inappropriate to base human risk assessment on the response in mice. Ivermectin is used at a therapeutic dose of 200 mcg/kg in a variety of species, including human. Ivermectin can be excreted in milk.

If overexposed to Ivermectin, symptoms may include decreased activity, slow rate of breathing, dilation of the pupils, muscle tremors, and incoordination.

EFFECTS OF CHRONIC EXPOSURE: Unknown for product mixture. When this product is used according to the directions, prolonged exposure of man is not expected. Ivermectin has tested negative in several mutagenicity studies. Ivermectin was administered to dogs daily for 3 months and to monkeys daily for 2 weeks. In dogs there was no effect up to 500 mcg/kg/day and in adult rhesus monkeys there was no effect at the maximum dosage used 1.2 mg/kg/day. At higher doses in dogs there was dilation of the pupils, and at still higher doses tremor and anorexia were noted.

Merck AgVet

IVOMEC DRENCH FOR SHEEP

QUANTITATIVE TOXICITY DATA: For pure Ivermectin			
TEST	SPECIES	ROUTE	RESULT
LD50	Mouse	Oral	25 mg/kg
LD50	Mouse	Intraperitoneal	30 mg/kg
LD50	Rat	Oral	50 mg/kg
LD50	Rat	Intraperitoneal	55 mg/kg
LD50	Rat (infant)	Oral	2 to 3 mg/kg
LD50	Rat	Inhalation	*
LD50	Rat	Dermal	More than 660 mg/kg
LD50	Rabbit	Dermal	406 mg/kg
LD50	Dog	Oral	About 80 mg/kg
LD50	Rhesus monkey	Oral	More than 24 mg/kg

*Maximum attainable concentration of 5.11 mg/liter produced transient irritation of mucous membranes but no deaths or other signs of toxicity after 1 hour exposure.

SECTION 8 - SPILL/LEAK/DISPOSAL PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIALS ARE RELEASED: Absorb small spills on spill pillows or other suitable absorbing material and place in a sealed container for disposal. Dike large spills and transfer to an appropriate container for disposal. Use suitable protective equipment (Section 9). Follow all fire prevention procedures (Section 4). Contact emergency response personnel for large spills. Keep unnecessary persons away.

Ivermectin is very toxic to certain aquatic species. Avoid contact of spilled materials and runoff with soil and surface waterways. Residual surface material should be removed with towels moistened with methanol. Incinerate all spill material and residues at temperatures greater than 600 deg C.

ENVIRONMENTAL DATA: Ivermectin: LC50 (Daphnia Magna) EPA classification = 25 ppt (parts per trillion), very highly toxic to aquatic organisms.

For additional assistance, CHEMTREC provides a toll-free Hotline for chemical emergencies regarding spills, leaks, exposure or accidents: 1-800-424-9300.

SECTION 9 - SPECIAL PROTECTION INFORMATION

RESPIRATORY: Not applicable.

HANDS/ARMS: Wash hands and exposed skin before meals or smoking and after work.

EYE/FACE: To avoid eye contact goggles could be worn.

ADDITIONAL PROTECTIVE EQUIPMENT: No special recommendations.

VENTILATION: None known.

SECTION 10 - SPECIAL PRECAUTIONS

SPECIAL PRECAUTIONS TO BE TAKEN WHEN:

HANDLING AND STORING, ETC.: Store in a cool place away from direct sunlight. Do not store this product at a temperature exceeding 30 deg C.

OTHER: Keep out of the reach of children.

SECTION 11 - BASIC TRANSPORTATION DESCRIPTION

SHIPPING REQUIREMENTS: Drugs or medicines, NOI Class 70
NMFC 60000 RVNX

SECTION 12 - MSDS PREPARATION

REVISION, June 1992, F. Lewandowski
E.V. Sargent, Ph.D.
Corporate Safety & Industrial Hygiene
DATE: August 28, 1990
F.J. Lewandowski, Jr.
Merck AgVet
DATE: September 11, 1990

While the information set forth is believed to be accurate as of the date hereof, Merck AgVet makes no warranty with respect hereto and disclaims all liability from reliance thereon.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representation as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s). A request has been made to the manufacturer to approve the contents of this material safety data sheet. Upon receipt a new MSDS will be made available.

COMPAS Code: 11400130