SAFETY DATA SHEETS

This SDS packet was issued with item:

078803141

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

078345017 078345025

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).

078345033 078345041 078345058 078408460 078704964 078714757

```
Reviewed on 10/01/2001
                                                                           5 Fire fighting measures
           1 Identification of substance
                                                             _____
                                                            Suitable extinguishing agents: CO2, sand, extinguishing
Product details
                                                             powder. Do not use water. Water mist
Trade name: Ivomec Pour-On for Cattle
                                                            For safety reasons unsuitable extinguishing agents: Water
Product number: (2.5L), (5L), (20L)
                                                              with full jet
                                                            Protective equipment: Fire fighters should wear self-
Manufacturer/Supplier:
 Merial Limited
                                                              contained breathing apparatus and full protective
   115 Transtech Drive
                                                              equipment.
   Athens, GA 30601
  Merial Canada Inc.
                                                                        6 Accidental release measures
    345 N. Boulevard Labbe
    Victoriaville, Quebec G6P 181
                                                            Person-related safety precautions: Mount respiratory
Information Phone No.: 819-758-0506
                                                              protective device. Wear protective equipment. Keep
Emergency Phone No.: 800-424-9300
                                                              unprotected persons away.
Information department: MSDS Coordinator
                                                            Measures for environmental protection: Do not allow product
Emergency information:
                                                              to reach sewage system or any water course.
  Spill In formation:
                                                            Measures for cleaning/collecting: Absorb with liquid-
    CHEMTREC(R) 1-800-424-9300
                                                              binding material (sand, diatomite, acid binders,
    CHEMTREC(R) International 1+703-527-3887
                                                              universal binders, sawdust). Dispose contaminated
    Reverse charges.
                                                              material as waste according to Section XIII. Ensure
Health Information: 1-888-637-4251, Option 5
                                                              adequate ventilation. Do not flush with water or aqueous
_____
                                                              cleansing agents
          2 Composition/Data on components
                                                                             7 Handling and Storage
                                                            ______
Chemical characterization
Description: Mixture: consisting of the following
 components.
                                                              Information for safe handling: Store in cool, dry place
                                                                in tightly closed containers. Handle with care. Avoid
Components:
                                                                jolting and impact. Use only in well ventilated areas.
                                                              Information about protection against explosions and
                                                                fires: Keep ignition sources away - Do not smoke.
           Non hazardous
            inert ingredients
                                                                Protect against electrostatic charges.
 67-63-0
                               Xi, F; R 11-36-67 80.0%
            Isopropanol
 70288-86-7 Ivermectin Comp. T, N; R 20/21-25-50 0.5%
                                                              Requirements to be met by storerooms and receptacles:
            Bla (C48H74O1)
                                                                Store in a cool location. Store only in the original
            Comp. Blb (C47H72O14)
                                                                container. Protect from light.
                                                              Information about storage in one common storage facility:
              3 Hazards identification
                                                                Not required.
_____
                                                              Further information about storage conditions: Keep
Hazard description:
                                                                receptacle tightly sealed. Store in cool, dry
 Pictogram: F Highly flammable
                                                                conditions in well sealed receptacles. Store in a cool,
Information pertaining to particular dangers for man and
                                                                dry, well ventilated place.
  environment: R 11 Highly flammable.
Classification system: The classification was made
                                                                  8 Exposure controls and personal protection
  according to the latest editions of international
                                                             _____
  substances lists, and from company and regulatory data.
                                                            Additional information about design of technical systems:
NFPA ratings (scale 0 - 4)
                                                              No further data; see item 7.
 Health = 3
                                                            Components with limit values that require monitoring at the
 Fire = 3
                                                              workplace:
  Reactivity = 0
                                                              67-63-0 Isopropanol
HMIS-ratings (scale 0 - 4)
                                                             ACGIH TLV (USA) Short-term value: (1230) mg/m3, (500) ppm
 Health = 3
                                                                             Long-term value: (983) mg/m3, (400) ppm
 Reactivity = 0
                                                                             NIC A 4
                                                             NIOSH REL (USA) Short-term value: 1225 mg/m3, 500 ppm
           4 First aid measures
                                                                             Long-term value: 980 mg/m3, 400 ppm
                                                             OSHA PEL (USA)
                                                                             980 mg/m3, 400 ppm
General information: No special measures required. Involve
                                                             MAK (Germany)
                                                                             500 mg/m3, 200 ppm
 doctor immediately.
                                                                             Y; (DFG)
After inhalation: Seek immediate medical advice.
After skin contact: Immediately wash with water and soap
                                                            Additional information: The lists that were valid during
  and rinse thoroughly.
                                                              the creation were used as basis.
After eye contact: Rinse opened eye for a minimum of 15
                                                            Personal protective equipment:
 minutes under running water. If symptoms occur, consult a
                                                              General protective and hygienic measures: Wash hands
                                                               before breaks and at the end of work. Avoid contact
 doctor.
After swallowing: Immediately call a doctor. Induce
                                                                with the eyes and skin. Do not eat, drink, smoke or
  vomiting, if person is conscious. Seek medical help.
                                                                inhale. Do not store food in the working area.
                                                              Protection of hands: Not required under normal conditions
                                                                of use.
                                                              Eye protection:
                                                                Pictogram: Tightly sealed goggles
                                                              Body protection: Impervious protective clothing
```

```
9 Physical and chemical properties
                                                                        13 Disposal considerations
Form: Liquid
                                                           Product:
Color: Colored liquid
                                                            Recommendation: Can be disposed of with household garbage
Odor: Characteristic
                                                              after consulting with the waste disposal facility
Change in condition
                                                              operator and the pertinent authorities and adhering to
 Melting point/Melting range: Undetermined.
                                                              the necessary technical regulations.
 Boiling point/Boiling range: 82 deg C (180 deg F)
                                                           Uncleaned packagings:
Flash point: 14 deg C (57 deg F)
                                                            Recommendation: Disposal must be made according to
Ignition temperature: 425 deg C (797 deg F)
                                                              official regulations.
Auto igniting: Product is not self-igniting.
Danger of explosion: Product is not explosive. However,
                                                                        14 Transport information
 formation of explosive air/vapor mixtures are possible.
                                                           ______
Explosion limits:
                                                           DOT regulations:
 Lower: 2.0 Vol %
                                                           Hazard class: 3
                                                           Identification number: UN1993
 Upper: 12.0 Vol %
Vapor pressure at 20 deg C (68 deg F): 43.0 hPa
                                                           Packing group: II
Specific gravity: Not determined.
                                                           Proper shipping name (technical name): Flammable liquid,
Solubility in / Miscibility with Water: Not miscible or
                                                            n.o.s., isopropanol (Isopropyl alcohol)
 difficult to mix.
                                                           Land transport ADR/RID (cross-border):
Solvent content:
                                                            ADR / RID class: 3 Flammable liquids
 Organic solvents: 80.0%
                                                            Item: 3b
_____
                                                            Danger code (Kemler): 33
           10 Stability and reactivity
                                                            UN-Number: 1993
                                                            Proper shipping name: 1993 Flammable liquid, n.o.s.,
Thermal decomposition / conditions to be avoided: No
                                                              isopropanol (Isopropyl alcohol)
 decomposition if used according to specifications.
                                                           Maritime transport IMDG:
Dangerous reactions: No dangerous reactions known.
                                                            IMDG Class: 3.2
Dangerous products of decomposition: No dangerous
                                                            Page: 3230
 decomposition products known.
                                                            UN Number: 1993
                                                            Packaging group: II
                                                            EMS Number: 3-07
            11 Toxicological information
_____
                                                            MFAG: 310,313
                                                            Marine pollutant: No
 LD/LC50 values that are relevant for classification:
                                                            Proper shipping name: Flammable liquid, n.o.s.,
 67-63-0 Isopropanol
                                                              isopropanol (Isopropyl alcohol)
                                                          Air transport ICAO-TI and IATA-DGR:
   Oral
                LD50
                                4570 mg/kg (rat)
                                                            ICAO/IATA Class: 3
   13400 mg/kg (rabbit)
                                                            UN/ID Number: 1993
                                                            Packing group: II
    _____
                                                            Proper shipping name: Flammable liquid, n. o. s.,
 70288-86-7 Ivermectin Comp. Bla (C48H7401)
                                                             isopropanol (Isopropyl alcohol)
          Comp. Blb (C47H72O14)
                                                           -----
                                                                             15 Regulations
   Oral
                LD50
                                 ~80 mg/kg (dog)
                                 25 mg/kg (mouse)
                                                           Sara
                                 50 mg/kg (rat)
                                                            Section 355 (extremely hazardous substances): None of the
   Dermal
                 LD50
                                 406 mg/kg (rabbit)
                                                              ingredients are listed.
                                                            Section 313 (Specific toxic chemical listings):
                                 >660 mg/kg (rat)
   Inhalative LC50/4 h
                                 5.11 mg/l (rat)
                                                              67-63-0 | Isopropanol
_____
                                                           TSCA (Toxic Substances Control Act):
                                                            67-63-0 | Isopropanol
Primary irritant effect:
 On the skin: No irritating effect known.
                                                           CA Proposition 65
 On the eye: No irritating effect known.
                                                            Chemicals known to cause cancer: None of the ingredients
 Sensitization: No sensitizing effects known.
                                                              are listed.
                                                            Chemicals known to cause reproductive toxicity: None of
          12 Ecological information
                                                              the ingredients are listed.
                                                           Product related hazard informations: The product has been
Ecotoxological effects:
                                                            classified and marked in accordance with directives on
 Acquatic toxicity:
                                                            hazardous materials.
                                                           Hazard symbols: F Highly flammable
 70288-86-7 Ivermectin Comp. Bla (C48H7401)
                                                           Risk phrases: 11 Highly flammable.
          Comp. Blb (C47H72014)
                                                           Safety phrases:
 LC50 /48 hrs 0.025 ppb (daphnia magna)
                                                            2 Keep out of the reach of children.
 LC50/96 hours .3 ug/l (Rainbow Trout)
                                                            7/9 Keep container tightly closed and in a well-
                                                                 ventilated place.
General notes:
                                                            16 Keep away from sources of ignition - No smoking.
 Water hazard class 1 (Self-assessment): slightly
                                                            29 Do not empty into drains.
   hazardous for water. Do not allow undiluted product or
                                                            33 Take precautionary measures against static
   large quantities of it to reach ground water, water
                                                                discharges.
   course or sewage system.
                                                            43 In case of fire, use sand, carbon dioxide or powdered
                                                                extinguishing agent. Never use water.
                                                            46 If swallowed, seek medical advice immediately and
                                                                show this container or label.
```

51 Use only in well-ventilated areas.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information ______

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact: MSDS Coordinator, 706-552-2739, msds@merial.com

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: although preparer and owner have taken reasonable care in the preparation of this document, we extend no warranties and make no representation as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each user 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 of any changes a new MSDS will be made available.

COMPAS Code: 45920010



Printing date 10/13/2010 Reviewed on 10/13/2010

1 Identification of substance

- · Product details
- · Trade name: IVOMEC POUR-ON FOR CATTLE
- · Manufacturer/Supplier:

Merial Limited 3239 Satellite Blvd. Duluth, Ga. 30096-4640

1-888-MERIAL 1 (1-888-637-4251)

· Emergency information:

Spill Information:

CHEMTREC® 1-800-424-9300

CHEMTREC® International 1+703-527-3887

International calls 011+703-527-3887

Reverse charges.

2 Composition/Data on components

· Chemical characterization

· Components:			
67-63-0	Isopropanol	※ Xi, ♦ F; R 11-36-67	80.0%
70288-86-7	Ivermectin Comp. B1a Comp. B1b	№ T, № N; R 20/21-25-50	0.5%
	Non hazardous inert ingredients		19.5 %

[·] Additional information: For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· Hazard description:





Irritant Highly flammable

· Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotizing effect.

Highly flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness

· Classification system:

The classification was made according to the latest editions of international substances lists, and from company and regulatory data.

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

· NFPA ratings (scale 0 - 4)



· HMIS-ratings (scale 0 - 4)



4 First aid measures

- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

· After eye contact:

Rinse opened eye for a minimum of 15 minutes under running water. Get medical attention immediately.

- · After swallowing: Do not induce vomiting; immediately call for medical help.
- · After self injection
- · Information for doctor. In case of symptomatic effect provide treatment to maintain life functions.

5 Fire fighting measures

· Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Protective equipment: Self-contained breathing apparatus and full protective equipment.

6 Accidental release measures

· Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- · Measures for environmental protection: Do not allow product to reach sewage system or any water course.
- · Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

7 Handling and storage

- · Handling:
- · Information for safe handling:

Store in cool, dry place in tightly closed containers.

Handle with care. Avoid jolting and impact.

Use only in well ventilated areas.

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Store in a cool, dry, well ventilated place.

• Recommended storage temperature: $< 30^{\circ}C (86^{\circ}F)$

8 Exposure controls and personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Components with limit values that require monitoring at the workplace:			
67-63-0 Isopropo	67-63-0 Isopropanol		
PEL (USA)	980 mg/m³, 400 ppm		
REL (USA)	Short-term value: 1225 mg/m³, 500 ppm		
	Long-term value: 980 mg/m³, 400 ppm		
TLV(USA)	Short-term value: 984 mg/m³, 400 ppm		
	Long-term value: 492 mg/m³, 200 ppm		
MAK (Germany)	500 mg/m³, 200 ppm		
	Y; DFG		

- · Additional information: The lists that were valid during the creation were used as basis.
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or inhale.

Do not store food in the working area.

- · Breathing equipment: Use suitable respiratory protective device when aerosol or mist is formed.
- · Protection of hands: Not required under normal conditions of use.
- · Eye protection:



Safety goggles.

9 Physical and chemical properties

٠ (зепен	ai I	njoi	таноп	

Form: Liquid
Color: Blue
Odor: Like alcohol

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

· Change in condition Melting point/Melting range: Boiling point/Boiling range:		
· Flash point:	14°C (57°F)	
· Ignition temperature:	425.0°C (797°F)	
· Auto igniting:	Product is not self-igniting.	
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixture are possible.	
· Explosion limits:		
Lower:	2.0 Vol %	
Upper:	12.0 Vol %	
· Vapor pressure at 20°C (68°F):	43.0 hPa (32 mm Hg)	
Specific gravity at 20°C (68°F): 0 g/cm ³		
· Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
Organic solvents:	80.0 %	
Solids content:	0.5 %	

10 Stability and reactivity

- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Materials to be avoided:
- · Dangerous reactions

Reacts with acetaldehyde, chlorine, ethylene oxide, hypochlorous acid, isocyanates, phosgene, oleum, perchloric acid, and strong oxidizing agents.

· Dangerous products of decomposition: No dangerous decomposition products known.

Toxicol	ogical informa	tion
Acute tox	<u> </u>	
		elevant for classification:
67-63-0 I	sopropanol	
Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rabbit)
Inhalatio	n LC50/4 h	30 mg/l (rat)
70288-86	-7 Ivermectin Co	np. B1a
	Comp. B1b	
Oral	LD Oral	>15 mg/kg (adult human)
	LD50	~80 mg/kg (dog)
		25 mg/kg (mouse)
		50 mg/kg (rat)
		>24 mg/kg (Rhesus monkey)

USA ·

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

Dermal	LD50	406 mg/kg (rabbit)
		>660 mg/kg (rat)
Inhalation	LC50/4h	>0.4 mg/kg (rat)
	LD Subcutaneous	>1.6 mg/kg (adult human)
	LD50 Intraperitoneal	55 mg/kg (rat)
	LD50 Subcutaneous	~10 mg/kg (juvenile dog)

- · Primary irritant effect:
- · on the skin: No irritating effect known.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

12 Ecological information

· Ecotoxological effects:

· Aquatic toxicity:

70288-86-7 Ivermectin Comp. B1a Comp. B1b

LC50 / 48 hrs 0.025 ppb (Daphnia magna) LC50/96 hours | 0.3 ug/l (Rainbow Trout)

13 Disposal considerations

- · Product:
- · Recommendation: Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· DOT regulations:



· Hazard class:

UN1219 · Identification number:

· Packing group: II

· Proper shipping name (technical name): ISOPROPANOL (ISOPROPYL ALCOHOL)

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

· Label 3

· Land transport ADR/RID (cross-border):



· ADR/RID class: 3 Flammable liquids

Danger code (Kemler): 33
UN-Number: 1219
Packaging group: II

• Proper shipping name: 1263 PAINT

· Maritime transport IMDG:



· IMDG Class: 3
 · UN Number: 1219
 · Label 3
 · Packaging group: II
 · EMS Number: F-E,S-E
 · Marine pollutant: Yes

· Proper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 3
 · UN/ID Number: 1219
 · Label 3
 · Packing group: II

· Proper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

15 Regulations

· SARA

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

67-63-0 Isopropanol

· TSCA (Toxic Substances Control Act):

67-63-0 Isopropanol

· CA Proposition 65

· Chemicals known to cause cancer:

None of the ingredients are listed.

-USA

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenesis potential categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

67-63-0 Isopropanol

3

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Product related hazard informations:

· Hazard symbols:

Irritant

Highly flammable

· Risk phrases:

Highly flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness

· Safety phrases:

Keep out of the reach of children.

Keep container tightly closed and in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin and eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point Take precautionary measures against static discharges.

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

If swallowed, seek medical advice immediately and show this container or label.

This material and its container must be disposed of as hazardous waste.

If swallowed, rinse mouth with water (only if the person is conscious)

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

Printing date 10/13/2010 Reviewed on 10/13/2010

Trade name: IVOMEC POUR-ON FOR CATTLE

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Contact: MSDS Coordinator, msds@merial.com

USA -



Printing date 10/19/2017 Reviewed on 10/18/2017

1 Identification

- · Product identifier
- · Trade name: Ivomec® Pour On (finished product)
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Merial, Inc.

3239 Satellite Blvd.

Duluth, Ga. 30096-4640

1-888-MERIAL 1 (1-888-637-4251)

· Emergency telephone number:

Emergency information:

Spill Information:

CHEMTREC® 1-800-424-9300

CHEMTREC® International 1+703-527-3887

International calls 011+703-527-3887

Reverse charges

Spill Information:

CHEMTREC® 1-800-424-9300

CHEMTREC® International 1+703-527-3887

International calls 011+703-527-3887

Reverse charges.

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · Label elements
- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms GHS02, GHS07
- · Signal word Danger
- · Hazard-determining components of labeling:

Isopropanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· Precautionary statements

P210

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

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P280	Wear protective gloves / eye protection / face protection.
P240	Ground/bond container and receiving equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	8 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present
	and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 2 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:				
	Isopropanol	50-70%		
	♦ Flam. Liq. 2, H225; ♦ Eye Irrit. 2A, H319; STOT SE 3, H336			
70288-86-7	Ivermectin Comp. B1a	≥ 0.25 - < 1%		
	Comp. B1b			
	♦ Acute Tox. 2, H300; Acute Tox. 3, H311; ♦ Acute Tox. 4, H332			

· Additional information: For the wording of the listed hazard phrases refer to section 16.

HS

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

4 First-aid measures

- · Description of first aid measures
- · General information:

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First Aid responders should pay attention to self-protection and use the recommended protective clothing Remove from exposure, lie down. Take off immediately all contaminated clothing. Victim to lie down in the recovery position, cover and keep him warm.

- · After inhalation: Move to fresh air.
- · After skin contact: Wash off immediately with plenty of water.
- · After eye contact:

Rinse immediately with plenty of water for at least 15 minutes. Keep eye wide open while rinsing.

- · After swallowing: Rinse mouth. Drink plenty of water.
- · After self injection
- · Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause drowsiness or dizziness.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes. Carbon oxides can be released in case of fire.

- · Advice for firefighters
- · Protective equipment: Self-contained breathing apparatus and full protective equipment.
- · Additional information

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

High risk of slipping due to leakage/spillage of product.

- · Environmental precautions: Do not allow product to reach sewage system or any water course.
- · Methods and material for containment and cleaning up: Pick up and transfer to properly labelled containers.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Provide sufficient air exchange and/or exhaust in work rooms.

Wash hands and face before breaks and immediately after handling the product. Keep working clothes separately.

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Protect from heat and direct sunlight.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep away from food, drink and animal feedingstuffs.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

67-63-0 Isopropo	67-63-0 Isopropanol	
PEL (USA)	Long-term value: 980 mg/m³, 400 ppm	
REL (USA)	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm	
TLV (USA)	Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm BEI	
AGW (Germany)	Long-term value: 500 mg/m³, 200 ppm 2(II);DFG, Y	

· Ingredients with biological limit values:

67-63-0 Isopropanol

BEI(USA) 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

BGW (Germany) 25 mg/l

Untersuchungsmaterial: Vollblut

Probennahmezeitpunkt: Expositionsende bzw. Schichtende

Parameter: Aceton

25 mg/l

Untersuchungsmaterial: Urin

Probennahmezeitpunkt: Expositionsende bzw. Schichtende

Parameter: Aceton

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes and clothing.

Only use protective equipment in accordance with national/international regulations. Follow the national regulations about wearing personal protective equipment and the warranty given by the manufacturer for the safe

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

function.

- · Breathing equipment: Use suitable respiratory protective device when aerosol or mist is formed.
- · Protection of hands: Wear nitrile rubber gloves to minimize skin exposure.
- · Eye protection: Wear safety glasses with side shields for normal handling.

9 Physical and chemical properties

Information on basic physical and chemical properties General Information Appearance: Form: Color: Blue Odor: Like alcohol Change in condition Melting point/Melting range: Boiling point/Boiling range: VIndetermined. 82 °C (180 °F) Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible.		
Appearance: Form: Color: Blue Codor: Like alcohol Change in condition Melting point/Melting range: Boiling point/Boiling range: Vindetermined. 82 °C (180 °F) Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible.		
Form: Color: Blue Like alcohol Change in condition Melting point/Melting range: Boiling point/Boiling range: VIndetermined. 82 °C (180 °F) Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits:		
Color: Odor: Like alcohol Change in condition Melting point/Melting range: Boiling point/Boiling range: VIndetermined. 82 °C (180 °F) Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits:		
 Odor: Like alcohol Change in condition Melting point/Melting range: Boiling point/Boiling range: 82 °C (180 °F) Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits: 		
Change in condition Melting point/Melting range: Boiling point/Boiling range: 14 °C (180 °F) 14 °C (57 °F) 15 Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible.		
Melting point/Melting range: Boiling point/Boiling range: VIndetermined. 82 °C (180 °F) 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits:		
Boiling point/Boiling range: 82 °C (180 °F) • Flash point: 14 °C (57 °F) • Ignition temperature: 425.0 °C (797 °F) • Auto igniting: Product is not self-igniting. • Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. • Explosion limits:		
 Flash point: 14 °C (57 °F) Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits: 		
 Ignition temperature: 425.0 °C (797 °F) Auto igniting: Product is not self-igniting. Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. Explosion limits: 		
 • Auto igniting: Product is not self-igniting. • Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. • Explosion limits: 		
• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor are possible. • Explosion limits:		
are possible. • Explosion limits:		
-	mixtures	
-		
Lower: 2.0 Vol %		
<i>Upper:</i> 12.0 Vol %		
· Vapor pressure at 20 °C (68 °F): 43 hPa (32 mm Hg)		
· Specific gravity: Not determined.		
· Solubility in / Miscibility with		
Water: Not determined.		
Organic solvents: 80.0 %		
Solids content: 0.5 %		
· Other information No further relevant information available.		

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No data available
- · Conditions to avoid Extremes of temperature and direct sunlight.
- · Incompatible materials: No further relevant information available.
- $\cdot \textit{Hazardous decomposition products:} \ \textit{No dangerous decomposition products known.}$

LIS

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

Acut wan	, eey .				
· <i>LD/LC50</i> v	· LD/LC50 values that are relevant for classification:				
67-63-0 Isa	67-63-0 Isopropanol				
Oral	LD50	4570 mg/kg (rat)			
Dermal	LD50	13400 mg/kg (rabbit)			
Inhalation	LC50/4 h	30 mg/l (rat)			
70288-86-7	⁷ Ivermectin Comp. B	Bla			
	Comp. B1b				
Oral	LD50	~80 mg/kg (dog)			
		25 mg/kg (mouse)			
		50 mg/kg (rat)			
		>24 mg/kg (Rhesus monkey)			
	LD Oral	>15 mg/kg (adult human)			
Dermal	LD50	406 mg/kg (rabbit)			
		>660 mg/kg (rat)			
Inhalation	LC50/4h	>0.4 mg/kg (rat)			
	LD50	55 mg/kg (rat)			
	LD50 Subcutaneous	~10 mg/kg (juvenile dog)			
	LD Subcutaneous	>1.6 mg/kg (adult human)			

- · Primary irritant effect:
- · on the skin: No irritating effect known.
- · on the eye: Causes serious eye irritation.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
67-63-0 Isopropanol	3

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity:

70288-86-7 Ivermectin Comp. B1a Comp. B1b

LC50/96 hours 3 ug/l (Rainbow Trout) LC50 / 48 hrs 0.025 ppb (Daphnia magna)

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

- $\cdot \textit{Persistence and degradability} \ \textit{No further relevant information available}.$
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

Transport information	
UN-Number DOT, ADR, IMDG, IATA	UN1993
UN proper shipping name DOT, ADR, IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (Isopropanol, Ivermectin)
Transport hazard class(es)	
DOT	
PAMMARE LOUG	
Class	3 Flammable liquids
Label	3
ADR, IMDG, IATA	
Class Label	3 Flammable liquids 3
	3
Packing group DOT, ADR, IMDG, IATA	II
	п
Environmental hazards:	V
Marine pollutant:	Yes
Special precautions for user	Warning: Flammable liquids
Danger code (Kemler):	33
EMS Number:	F-E,S-E

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation": UN 1219 ISOPROPANOL, 3, II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · SARA
- · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

67-63-0 Isopropanol

· TSCA (Toxic Substances Control Act):

67-63-0 Isopropanol

- · CA Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- · Carcinogenesis potential categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

67-63-0 Isopropanol

A4

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms GHS02, GHS07
- · **Signal word** Danger
- · Hazard-determining components of labeling:

Isopropanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· Precautionary statements

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

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

Printing date 10/19/2017 Reviewed on 10/18/2017

Trade name: Ivomec® Pour On (finished product)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray	
P280	Wear protective gloves / eye protection / face protection.	
P240	Ground/bond container and receiving equipment.	
P242	Use only non-sparking tools.	
P243	Take precautionary measures against static discharge.	
P264	Wash thoroughly after handling.	
P271	Use only outdoors or in a well-ventilated area.	
P303+P361+P3	353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.	
P305+P351+P3	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P312	Call a POISON CENTER/doctor if you feel unwell.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.	
P405	Store locked up.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	
P403+P235	Store in a well-ventilated place. Keep cool.	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.	

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Contact: SDS Coordinator, msds@merial.com
- · Date of preparation / last revision 10/19/2017 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids - Category 2

Acute Tox. 2: Acute toxicity - Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity - Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3