SAFETY DATA SHEETS

This SDS packet was issued with item:

078784511

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

078344603 078344611 078464795 078471067

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).

078784503

Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/16/2005 Reviewed on 01/16/2005

1 Identification of substance

· **Product details**

· **Trade name:** **Ivermectin**
EQVALAN Liquid for Horses

· **Item number:** 25877

· **Manufacturer/Supplier:**
Merial Limited
3239 Satellite Blvd.
Duluth, Ga. 30096-4640
1-888-MERIAL 1 (1-888-637-4251)

· **Emergency information:**
Emergency Information: CHEMTREC International 1 + 703-527-3887
Collect calls accepted
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**
· **Description:** Mixture: consisting of the following components.

· **Components:**		
	Non hazardous substance	76.0%
57-55-6	Propylene Glycol	20.0%
100-51-6	benzyl alcohol	3.0%
	Ivermectin is a mixture of 90% or more of 5-0-demethyl-22,23-dihydroavermectin Ala (component H2Bla) and 10% or less of 5-0-demethyl-25-de(1-methylpropyl)-22,23-dihydro-25-(1-methylethyl)avermectin Ala (component H2Blb). T+, N; R 28-36-50	1.0%

3 Hazards identification

· **Hazard description:**



T Toxic

· **Information pertaining to particular dangers for man and environment:**
R 25 Toxic if swallowed.

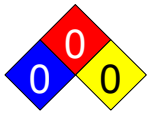
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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/16/2005 Reviewed on 01/16/2005

Trade name: Ivermectin
EQVALAN Liquid for Horses

· **Classification system:**
The classification was made according to the latest editions of international substances lists, and from company and regulatory data.
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Not an expected route of entry.
· **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 several minutes under running water. Then consult a doctor.
· **After swallowing:** Immediately call a doctor.
· **After self injection**
· **Information for doctor.**
The following symptoms may occur
Overexposure to ivermectin may cause drowsiness, depressed motor activity, slowed breathing, dilation of the pupils, tremors, vomiting, anorexia and incoordination.
Direct contact of the solution with eyes can cause irritation. The oral toxicity of this formulation is unknown.
Benzyl alcohol may be irritating to the upper respiratory tract.

5 Fire fighting measures

· **Suitable extinguishing agents:** Use water spray or all purpose dry chemical.
· **Special hazards caused by the material, its products of combustion or resulting gases:**
If exposed to fire, toxic gases including CO and CO2 may be generated.
· **Protective equipment:**
Fire fighters should wear self-contained breathing apparatus and full protective equipment.

6 Accidental release measures

· **Person-related safety precautions:** Not required.
· **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).

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Printing date 01/16/2005 Reviewed on 01/16/2005

Trade name: Ivermectin
EQVALAN Liquid for Horses

Dispose of contaminated material as waste according to section XIII.

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.
· **Information about protection against explosions and fires:** No special measures required.

· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original container.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in a cool, dry, well ventilated place.
· **Recommended storage temperature:** < 30°C (86°F)

8 Exposure controls and personal protection

· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **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 and skin.
Do not eat, drink, smoke or inhale.
Do not store food in the working area.
· **Breathing equipment:**
An approved and properly fitted half-faced negative pressure, organic vapor respirator or respirator of equal or greater protection is recommended in handling this chemical.
· **Protection of hands:**



Rubber or other impervious gloves

· **Eye protection:** Safety goggles.
· **Body protection:** Impervious protective clothing

9 Physical and chemical properties

· **General Information**	
Form:	Liquid

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Material Safety Data Sheet
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Printing date 01/16/2005 Reviewed on 01/16/2005

Trade name: Ivermectin
EQVALAN Liquid for Horses

Color:	Clear
Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100°C (212°F)
· **Flash point:**	101°C (214°F)
· **Ignition temperature:**	371.0°C (700°F)
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	2.6 Vol %
Upper:	12.6 Vol %
· **Vapor pressure at 20°C (68°F):**	23.0 hPa (17 mm Hg)
· **Specific gravity:**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Dangerous reactions** No dangerous reactions known.
· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
100-51-6 benzyl alcohol		
Oral	LD50	1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LD 50	1000ppm (rat)
Ivermectin is a mixture of 90% or more of 5-0-demethyl-22,23-dihydroavermectin Ala (component H2Bla) and 10% or less of 5-0-demethyl-25-de(1-methylpropyl)-22,23-dihydro-25-(1-methylethyl) avermectin Ala (component H2Blb).		
Oral	LD50	24 mg/kg (Rhesus monkey)
		25 mg/kg (mouse)
		50 mg/kg (rat)
		80 mg/kg (dog)
Dermal	LD50	406 mg/kg (rabbit)

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Trade name: Ivermectin
EQVALAN Liquid for Horses

		>660 mg/kg (rat)
Inhalative	LD 50	>5.11 mg/l (rat)

· **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:
Toxic

12 Ecological information

· **Ecotoxological effects:**
· **Remark:**
Ivermectin: LC 50 (Daphnia Magna) EPA Classification=25ppt. Very highly toxic to aquatic organisms.
· **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow any volumes of product to reach ground water, water source or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

· **Product:**
· **Recommendation:** Incinerate at an EPA approved incinerator facility.

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

14 Transport information

· **DOT regulations:**
· **Hazard class:** -

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

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** -

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/16/2005 Reviewed on 01/16/2005

Trade name: Ivermectin
EQVALAN Liquid for Horses

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5	water, distilled, conductivity or of similar purity
57-55-6	Propylene Glycol
100-51-6	benzyl alcohol

· **CA Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity:**
None of the ingredients are listed.

· **Carcinogenesis potential categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **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:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**
T Toxic

· **Hazard-determining components of labelling:**
Ivermectin is a mixture of 90% or more of 5-0-demethyl-22,23-dihydroavermectin Ala (component H2Bla) and 10% or less of 5-0-demethyl-25-de(1-methylpropyl)-22,23-dihydro-25-(1-methylethyl) avermectin Ala (component H2Blb).

· **Risk phrases:**
25 Toxic if swallowed.

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/16/2005 *Reviewed on 01/16/2005*

Trade name: Ivermectin
EQVALAN Liquid for Horses

· ***Safety phrases:***
1/2 Keep locked up and out of the reach of children.
13 Keep away from food, drink and animal feedingstuffs.
20 When using do not eat or drink.
28 After contact with skin, wash immediately with plenty of water
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
36/39 Wear suitable protective clothing and eye/face protection.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately.
52 Not recommended for interior use on large surface areas.

· ***Water hazard class:*** *Water hazard class 2 (Self-assessment): 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, msds@merial.com*

USA

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Material Safety Data Sheet

ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 *Reviewed on 01/20/2005*

1 Identification of substance

· **Product details**

· **Trade name:** **Rabies Vaccine (Killed Virus) Ehrlichia Risticii**
EQUINE POTOMAVAC + IMRAB®

· **Item number:** 2420, 2421, 2426, 2427, 3421

· **Manufacturer/Supplier:**
Merial Limited
3239 Satellite Blvd.
Duluth, Ga. 30096-4640
1-888-MERIAL 1 (1-888-637-4251)

· **Information department:** MSDS Coordinator
· **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

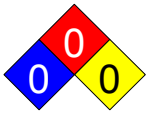
· **Chemical characterization**
· **Description:** Mixture: consisting of the following components.

· **Components:**		
	Non hazardous inert ingredients	99.9 %
54-64-8	Thimerosal	0.1%

· **Vaccine components** This product is a vaccine (biological) for use in horses.

3 Hazards identification

· **Hazard description:** Not applicable.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and from company and regulatory data.
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 Reviewed on 01/20/2005

Trade name: Rabies Vaccine (Killed Virus) Ehrlichia Risticii
EQUINE POTOMAVAC + IMRAB®

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

· **General information:** No special measures required.
· **After inhalation:** Not an expected route of entry.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for a minimum of 15 minutes under running water. Get medical attention immediately.
· **After swallowing:** Immediately call a doctor.

5 Fire fighting measures

· **Suitable extinguishing agents:** Use water spray or all purpose dry chemical.
· **Protective equipment:**
Fire fighters should wear self-contained breathing apparatus and full protective equipment.

6 Accidental release measures

· **Person-related safety precautions:** Not required.
· **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 XIII.
To clean spills or contamination use 1:30 dilution of household bleach.
· **Additional information:** No dangerous substances are released.

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.
· **Information about protection against explosions and fires:** No special measures required.

· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original container.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Store in a cool, dry, well ventilated place.

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 Reviewed on 01/20/2005

Trade name: Rabies Vaccine (Killed Virus) Ehrlichia Risticii EQUINE POTOMAVAC + IMRAB®

· **Recommended storage temperature:**
35-45ºF (2-7ºC)
CAUTION: Do not freeze

8 Exposure controls and personal protection

· **Components with limit values that require monitoring at the workplace:**	
54-64-8 Thimerosal	
TLV (USA)	See Mercury, Aryl

· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or inhale.
Do not store food in the working area.
· **Protection of hands:** Not required under normal conditions of use.
· **Eye protection:** Safety goggles.

9 Physical and chemical properties

· **General Information**	
Form:	Liquid
Color:	Clear
Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Specific gravity:**	Not determined.
· **Solubility in / Miscibility with Water:**	Fully miscible.
· **Solvent content:**	
Organic solvents:	0.0 %
· **Solids content:**	0.1 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 Reviewed on 01/20/2005

Trade name: Rabies Vaccine (Killed Virus) Ehrlichia Risticii EQUINE POTOMAVAC + IMRAB®

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

11 Toxicological information

· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritating effect known.
· **on the eye:** No irritating effect known.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· **Product:**
· **Recommendation:** Incinerate in an EPA approved facility for the incineration of mercury.
· **Waste disposal key:**
D009 - Waste MEDICINE, LIQUID, TOXIC, 6.1, UN1851, PGIII (Vaccines with thimerosal)

· **Uncleaned packagings:**
· **Recommendation:** Incinerate in an EPA approved facility for the incineration of mercury.
· **Recommended cleansing agent:** Flood area with 10% household bleach.

14 Transport information

· **DOT regulations:**
· **Hazard class:** -

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

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 Reviewed on 01/20/2005

Trade name: Rabies Vaccine (Killed Virus) Ehrlichia Risticii EQUINE POTOMAVAC + IMRAB®

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** -

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**
54-64-8 Thimerosal

· **CA Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity:**
None of the ingredients are listed.

· **Carcinogenesis potential categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **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:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

· **Safety phrases:**
29 Do not empty into drains.

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

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Material Safety Data Sheet
ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 01/20/2005 *Reviewed on 01/20/2005*

Trade name: Rabies Vaccine (Killed Virus) Ehrlichia Risticii EQUINE POTOMAVAC + IMRAB®

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.

· **Department issuing MSDS:** MSDS Coordinator
· **Contact:** MSDS Coordinator, msds@merial.com

USA

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