according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Date of last issue: 06.07.2024 Version **Revision Date:** SDS Number: 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name Ivermectin Liquid Formulation

Manufacturer or supplier's details

Company MSD

Address Briahnager - Off Pune Nagar Road

Wagholi - Pune - India 412 207

Telephone +1-908-740-4000

Emergency telephone number: +1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use Veterinary product Restrictions on use Not applicable

## 2. HAZARDS IDENTIFICATION

#### Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

### Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

**GHS Classification** 

Acute toxicity (Oral) Category 5

Skin corrosion/irritation Category 2

Serious eye damage/eye irri-

tation

Category 2A

Category 1B Reproductive toxicity

single exposure (Oral)

Specific target organ toxicity - : Category 2 (Central nervous system)

Specific target organ toxicity - :

single exposure

Category 3

repeated exposure (Oral)

Specific target organ toxicity - : Category 2 (Central nervous system)

Short-term (acute) aquatic

hazard

Category 1

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Long-term (chronic) aquatic

hazard

Category 1

#### **GHS** label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H303 May be harmful if swallowed.

H315 + H319 Causes skin irritation and serious eye irritation.

H335 May cause respiratory irritation. H360D May damage the unborn child.

H371 May cause damage to organs (Central nervous system) if

swallowed.

H373 May cause damage to organs (Central nervous system)

through prolonged or repeated exposure if swallowed. H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

### Prevention:

P203 Obtain, read and follow all safety instructions before use.

P260 Do not breathe mist or vapours.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or with adequate ventilation.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

### Response:

P301 + P332 + P317 IF SWALLOWED or if skin irritation oc-

curs: Get medical help.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P304 + P340 + P319 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel

unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

P308 + P316 IF exposed or concerned: Get emergency medi-

cal help immediately.

P337 + P317 If eye irritation persists: Get medical help.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P391 Collect spillage.

#### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024
11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

disposal plant.

Other hazards which do not result in classification

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
N-Methyl-2-pyrrolidone	872-50-4	>= 10 - < 20
Ivermectin	70288-86-7	>= 1 - < 2.5

#### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention.

Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and May be harmful if swallowed.

Causes skin irritation and serious eye irritation.

delayed

May cause respiratory irritation.

May damage the unborn child.

May cause damage to organs if swallowed.

May cause damage to organs through prolonged or repeated

exposure if swallowed.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx)

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

## 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024
11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

Already sensitised individuals, and those susceptible

to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respira-

tory irritants or sensitisers.

Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labelled containers.

Store locked up. Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis		
Ivermectin	70288-86-7	TWA	30 μg/m3 (OEB 3)	Internal		
	Further information: Skin					
		Wipe limit	300 μg/100 cm2	Internal		

### **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentration	Basis
N-Methyl-2-pyrrolidone	872-50-4	5-Hydroxy- N-methyl-2- pyrrolidone	Urine	End of shift (As soon as possible after exposure ceases)	100 mg/l	ACGIH BEI

**Engineering measures**: Use appropriate engineering controls and manufacturing

technologies to control airborne concentrations (e.g., drip-less

quick connections).

All engineering controls should be implemented by facility

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face contain-

ment devices).

Minimize open handling.

Personal protective equipment

Respiratory protection If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection. Combined particulates and organic vapour type

Filter type

Material

Hand protection

Chemical-resistant gloves

Remarks Consider double gloving.

Eye protection Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a

potential for direct contact to the face with dusts, mists, or

aerosols.

Skin and body protection Work uniform or laboratory coat.

> Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable

suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

If exposure to chemical is likely during typical use, provide eye Hygiene measures

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures. industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** liquid

Colour light yellow

Odour characteristic

Odour Threshold No data available

No data available pН

Melting point/freezing point No data available

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Initial boiling point and boiling :

range

No data available

Flash point : > 100 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.90 - 0.92 g/cm<sup>3</sup>

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-

octanol/water

: Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle characteristics

Particle size : Not applicable

### 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac- : Can react with strong oxidizing agents.

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

tions

Conditions to avoid : None known. Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

### 11. TOXICOLOGICAL INFORMATION

Information on likely routes of:

exposure

Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity** 

May be harmful if swallowed.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 4,463 mg/kg

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Components:** 

N-Methyl-2-pyrrolidone:

Acute oral toxicity : LD50 (Rat): 4,150 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

Ivermectin:

Acute oral toxicity : LD50 (Rat): 50 mg/kg

LD50 (Mouse): 25 mg/kg

LD50 (Monkey): > 24 mg/kg

Target Organs: Central nervous system Symptoms: Vomiting, Dilatation of the pupil Remarks: No mortality observed at this dose.

Acute inhalation toxicity : LC50 (Rat): 5.11 mg/l

Exposure time: 1 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 406 mg/kg

LD50 (Rat): > 660 mg/kg

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

#### Skin corrosion/irritation

Causes skin irritation.

## **Components:**

## N-Methyl-2-pyrrolidone:

Result : Skin irritation

### Ivermectin:

Species : Rabbit

Result : No skin irritation

## Serious eye damage/eye irritation

Causes serious eye irritation.

### **Components:**

### N-Methyl-2-pyrrolidone:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

### Ivermectin:

Species : Rabbit

Result : Mild eye irritation

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

### **Components:**

## N-Methyl-2-pyrrolidone:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact Species : Mouse

Method : OECD Test Guideline 429

Result : negative

Remarks : Based on data from similar materials

## Ivermectin:

Exposure routes : Dermal Species : Humans

Result : Does not cause skin sensitisation.

### Germ cell mutagenicity

Not classified based on available information.

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

### **Components:**

## N-Methyl-2-pyrrolidone:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Ingestion Method: OECD Test Guideline 474

Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Hamster

Application Route: Ingestion Method: OECD Test Guideline 475

Result: negative

#### Ivermectin:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)
Test system: human diploid fibroblasts

Result: negative

Test Type: Mouse Lymphoma

Result: negative

### Carcinogenicity

Not classified based on available information.

## **Components:**

### N-Methyl-2-pyrrolidone:

Species: RatApplication Route: IngestionExposure time: 2 YearsResult: negative

Species : Rat

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Application Route : inhalation (vapour)

Exposure time : 2 Years
Result : negative

Ivermectin:

Species : Rat Application Route : Oral

NOAEL : 1.5 mg/kg body weight

Result : negative

Remarks : Based on data from similar materials

Species : Mouse Application Route : Oral

NOAEL : 2.0 mg/kg body weight

Result : negative

Remarks : Based on data from similar materials

### Reproductive toxicity

May damage the unborn child.

### Components:

## N-Methyl-2-pyrrolidone:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 416

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: positive

Test Type: Fertility/early embryonic development

Species: Rat

Application Route: inhalation (vapour)

Result: positive

Test Type: Embryo-foetal development

Species: Rabbit

Application Route: Ingestion

Result: positive

Reproductive toxicity - As-

sessment

: Clear evidence of adverse effects on development, based on

animal experiments.

Ivermectin:

Effects on fertility : Test Type: Fertility

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Species: Rat

Application Route: Oral

Fertility: NOAEL: 0.6 mg/kg body weight

Result: Animal testing did not show any effects on fertility.

Effects on foetal develop-

ment

Test Type: Development

Species: Mouse Application Route: Oral

Developmental Toxicity: NOAEL: 0.2 mg/kg body weight Result: Teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally

toxic doses

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: LOAEL: 0.4 mg/kg body weight Result: Embryotoxic effects and adverse effects on the off-

spring were detected.

Remarks: The mechanism or mode of action may not be rele-

vant in humans.

Test Type: Development

Species: Rabbit

Application Route: Oral

Result: Teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally

toxic doses

### STOT - single exposure

May cause respiratory irritation.

May cause damage to organs (Central nervous system) if swallowed.

### **Components:**

## N-Methyl-2-pyrrolidone:

Assessment : May cause respiratory irritation.

## Ivermectin:

Target Organs : Central nervous system
Assessment : Causes damage to organs.

# STOT - repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.

### Components:

## Ivermectin:

Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

### Repeated dose toxicity

## **Components:**

### N-Methyl-2-pyrrolidone:

Species : Rat, male
NOAEL : 169 mg/kg
LOAEL : 433 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Method : OECD Test Guideline 408

 Species
 : Rat

 NOAEL
 : 0.5 mg/l

 LOAEL
 : 1 mg/l

Application Route : inhalation (dust/mist/fume)

Exposure time : 96 Days

Method : OECD Test Guideline 413

Species: RabbitNOAEL: 826 mg/kgLOAEL: 1,653 mg/kgApplication Route: Skin contactExposure time: 20 Days

#### Ivermectin:

Species : Dog
NOAEL : 0.5 mg/kg
LOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 14 Weeks

Target Organs : Central nervous system

Symptoms : Dilatation of the pupil, Tremors, Lack of coordination, anorexia

Species : Monkey
NOAEL : 1.2 mg/kg
Application Route : Oral
Exposure time : 2 Weeks

Remarks : No significant adverse effects were reported

Species : Rat

NOAEL : 0.4 mg/kg

LOAEL : 0.8 mg/kg

Application Route : Oral

Exposure time : 3 Months

Target Organs : spleen, Bone marrow, Kidney

### **Aspiration toxicity**

Not classified based on available information.

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Date of last issue: 06.07.2024 Version Revision Date: SDS Number: 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

### **Experience with human exposure**

### **Components:**

N-Methyl-2-pyrrolidone:

Skin contact Symptoms: Skin irritation

Ivermectin:

Skin contact Remarks: Can be absorbed through skin.

Eve contact Remarks: May irritate eyes.

Symptoms: Drowsiness, Dilatation of the pupil, Tremors, Vom-Ingestion

iting, anorexia, Lack of coordination

#### 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

### **Components:**

# N-Methyl-2-pyrrolidone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 500 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 24 h Method: DIN 38412

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): 600.5

Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 92.6 mg/l

Exposure time: 72 h

Toxicity to microorganisms EC50: > 600 mg/l

> Exposure time: 30 min Method: ISO 8192

Toxicity to daphnia and other:

aquatic invertebrates (Chron-

ic toxicity)

NOEC: 12.5 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

### Ivermectin:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 0.003 mg/l

Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.0048 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.000025 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

plants mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 9.1

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox- :

icity)

10,000

M-Factor (Chronic aquatic

toxicity)

10,000

### Persistence and degradability

## **Components:**

## N-Methyl-2-pyrrolidone:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 73 % Exposure time: 28 d

Method: OECD Test Guideline 301C

Ivermectin:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 50 % Exposure time: 240 d

## **Bioaccumulative potential**

### **Components:**

## N-Methyl-2-pyrrolidone:

Partition coefficient: n- : log Pow: -0.46

octanol/water Method: OECD Test Guideline 107

Ivermectin:

Bioaccumulation : Bioconcentration factor (BCF): 74

Partition coefficient: n-

octanol/water

log Pow: 3.22

### Mobility in soil

No data available

## Other adverse effects

No data available

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

**Revision Date:** Date of last issue: 06.07.2024 Version SDS Number: 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

#### 13. DISPOSAL CONSIDERATIONS

**Disposal methods** 

Waste from residues Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Empty containers should be taken to an approved waste han-Contaminated packaging

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

### 14. TRANSPORT INFORMATION

## International Regulations

**UNRTDG** 

UN 3082 UN number

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, Proper shipping name

N.O.S.

(Ivermectin)

Class 9 Packing group Ш Labels 9 Environmentally hazardous yes

**IATA-DGR** 

UN/ID No. UN 3082

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.

(Ivermectin)

964

Class 9 Ш Packing group

Labels Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen-

964

ger aircraft)

Environmentally hazardous yes

**IMDG-Code** 

**UN** number UN 3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Ivermectin)

Class 9 Ш Packing group Labels 9 EmS Code

F-A, S-F Marine pollutant yes

## Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024
11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

### **16. OTHER INFORMATION**

Revision Date : 28.09,2024

**Further information** 

Sources of key data used to : compile the Safety Data

compile the Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization: ISHL - Industrial Safety and Health Law (Japan): ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-

according to the Globally Harmonized System



# **Ivermectin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.07.2024 11.0 28.09.2024 1204466-00025 Date of first issue: 09.01.2017

lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

IN / EN