

**BERMECTINE****SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier:** BERMECTINE**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Plaguicide . For professional user/industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Details of the supplier of the safety data sheet:**Probelte, S.A.U.  
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30100 Murcia - Murcia - Spain  
Phone.: 34 968 307 250 - Fax: 34 968 305 432  
probelte@probelte.es  
www.probelte.es**1.4 Emergency telephone number:****SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture:****CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard, Category 1, H410

Asp. Tox. 1: Aspiration hazard, Category 1, H304

Eye Dam. 1: Serious eye damage, Category 1, H318

Flam. Liq. 3: Flammable liquids, Category 3, H226

STOT RE 2: Specific target organ toxicity by inhalation, repeated exposure, Category 2, H373

STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

**2.2 Label elements:****CLP Regulation (EC) No 1272/2008:****Danger****Hazard statements:**

Acute Tox. 4: H302 - Harmful if swallowed

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways

Eye Dam. 1: H318 - Causes serious eye damage

Flam. Liq. 3: H226 - Flammable liquid and vapour

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation)

STOT SE 3: H336 - May cause drowsiness or dizziness

**Precautionary statements:**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P261: Avoid breathing dust/fume/gas/mist/vapours/spray

P280: Wear protective gloves/protective clothing/eye protection/face protection

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

P310: Immediately call a poison center/doctor

P370+P378: In case of fire: Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish

P391: Collect spillage

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively

**Supplementary information:**

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### SECTION 2: HAZARDS IDENTIFICATION (continued)

EUH066: Repeated exposure may cause skin dryness or cracking  
EUH401: To avoid risks to human health and the environment, comply with the instructions for use

**Additional labeling:**

Active ingredient: Abamectin.

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substance:**






Non-applicable

**3.2 Mixture:**

**Chemical description:** Mixture composed of emulsions in solvents

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: Non-applicable EC: 918-811-1 Index: Non-applicable REACH: 01-2119463583-34-XXXX	<b>Hydrocarbons, C10, aromatics, &lt; 1% naphthalene</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Regulation 1272/2008 Aquatic Chronic 2: H411; Asp. Tox. 1: H304; STOT SE 3: H336; EUH066 - Danger 	Self-classified 50 - <75 %
CAS: 90194-26-6 EC: 290-635-1 Index: Non-applicable REACH: Non-applicable	<b>Benzenesulfonic acid, 4-C10-14-alkyl derivs., calcium salts</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Regulation 1272/2008 Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger 	Self-classified 1 - <2,5 %
CAS: 71751-41-2 EC: Non-applicable Index: 606-143-00-0 REACH: Non-applicable	<b>Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Regulation 1272/2008 Acute Tox. 1: H330; Acute Tox. 2: H300; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Repr. 2: H361d; STOT RE 1: H372 - Danger 	ATP ATP03 1 - <2,5 %
CAS: 78-83-1 EC: 201-148-0 Index: 603-108-00-1 REACH: 01-2119484609-23-XXXX	<b>iso-butanol</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Regulation 1272/2008 Eye Dam. 1: H318; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H335; STOT SE 3: H336 - Danger 	ATP CLP00 1 - <2,5 %
CAS: 128-37-0 EC: 204-881-4 Index: Non-applicable REACH: 01-2119565113-46-XXXX	<b>2,6-di-tert-butyl-p-cresol</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Regulation 1272/2008 Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning 	Self-classified <1 %

Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

### SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

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### SECTION 4: FIRST AID MEASURES (continued)

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

#### **By ingestion/aspiration:**

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

#### **4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

#### **4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

#### **5.1 Extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>). IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

#### **5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

#### **5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

#### **Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### **6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

#### **6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

#### **6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### **6.4 Reference to other sections:**

See sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### **7.1 Precautions for safe handling:**

A.- Precautions for safe manipulation

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### SECTION 7: HANDLING AND STORAGE (continued)

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

#### B.- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

#### C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

#### D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

### 7.2 Conditions for safe storage, including any incompatibilities:

#### A.- Technical measures for storage

Minimum Temp.:	2 °C
Maximum Temp.:	30 °C
Maximum time:	24 Months

#### B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

### 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace

There are no occupational exposure limits for the substances contained in the product

#### DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hydrocarbons, C10, aromatics, < 1% naphthalene CAS: Non-applicable EC: 918-811-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	151 mg/m <sup>3</sup>	Non-applicable
iso-butanol CAS: 78-83-1 EC: 201-148-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	310 mg/m <sup>3</sup>
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,5 mg/m <sup>3</sup>	Non-applicable

#### DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hydrocarbons, C10, aromatics, < 1% naphthalene CAS: Non-applicable EC: 918-811-1	Oral	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	32 mg/m <sup>3</sup>	Non-applicable

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
iso-butanol CAS: 78-83-1 EC: 201-148-0	Oral	Non-applicable	Non-applicable	25 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	55 mg/m <sup>3</sup>
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,25 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,86 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification		Short exposure		Long exposure	
iso-butanol CAS: 78-83-1 EC: 201-148-0	STP	10 mg/L	Fresh water	0,4 mg/L	
	Soil	0,0699 mg/kg	Marine water	0,04 mg/L	
	Intermittent	11 mg/L	Sediment (Fresh water)	1,52 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,152 mg/kg	
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	STP	0,17 mg/L	Fresh water	0,000199 mg/L	
	Soil	0,04769 mg/kg	Marine water	0,0000199 mg/L	
	Intermittent	0,00199 mg/L	Sediment (Fresh water)	0,0996 mg/kg	
	Oral	8,33 g/kg	Sediment (Marine water)	0,00996 mg/kg	



**8.2 Exposure controls:**

A.- General security and hygiene measures in the work place



In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles		EN 149:2001+A1:2009 EN 405:2001+A1:2009	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016 EN 16523-1:2015 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D.- Ocular and facial protection





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection



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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2012 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	74,79 % weight
V.O.C. density at 20 °C:	729,18 kg/m <sup>3</sup> (729,18 g/L)
Average carbon number:	9,12
Average molecular weight:	125,7 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Transparent
Colour:	Yellowish
Odour:	Characteristic
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	188 °C
Vapour pressure at 20 °C:	54 Pa
Vapour pressure at 50 °C:	384,23 Pa (0,38 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	925 - 1025 kg/m <sup>3</sup>
Relative density at 20 °C:	0,925 - 1,025
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Concentration:	Non-applicable *
pH:	6,65 - 8,65 at 1 %
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

#### Flammability:

Flash Point:	61 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	345 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available

#### Explosive:

Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

#### 9.2 Other information:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

#### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

#### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

#### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

#### 10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

#### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

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## BERMECTINE

### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

The experimental information related to the toxicological properties of the product itself is not available

#### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

##### A- Ingestion (acute effect):

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.

##### B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.

##### C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Produces serious eye damage after contact.

##### D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.  
IARC: 2,6-di-tert-butyl-p-cresol (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.

##### E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

##### F- Specific target organ toxicity (STOT) - single exposure:

Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

##### G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Skin: Repeated exposure may cause skin dryness or cracking

##### H- Aspiration hazard:

The consumption of a considerable dose can cause pulmonary damage.

#### Other information:

Non-applicable

#### Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
iso-butanol	3350 mg/kg		Rat
CAS: 78-83-1		2460 mg/kg	Rabbit
EC: 201-148-0		LCS0 inhalation 24,6 mg/L (4 h)	Rat
Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	10 mg/kg		Rat
CAS: 71751-41-2		Non-applicable	
EC: Non-applicable		LCS0 inhalation 0,05 mg/L (4 h) (ATEI)	

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**BERMECTINE**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
2,6-di-tert-butyl-p-cresol	10000 mg/kg	Non-applicable	Rat
CAS: 128-37-0	Non-applicable	Non-applicable	
EC: 204-881-4	Non-applicable	Non-applicable	

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

Identification	Acute toxicity		Species	Genus
	LC50	EC50		
Hydrocarbons, C10, aromatics, < 1% naphthalene CAS: Non-applicable EC: 918-811-1	LC50	1 - 10 mg/L (96 h)		Fish
	EC50	1 - 10 mg/L		Crustacean
	EC50	1 - 10 mg/L		Algae
Abamectin (combination of avermectin B1a and avermectin B1b) (ISO) CAS: 71751-41-2 EC: Non-applicable	LC50	0.0001 mg/L (96 h)	N/A	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
iso-butanol CAS: 78-83-1 EC: 201-148-0	LC50	2030 mg/L (96 h)	Carassius auratus	Fish
	EC50	1439 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1250 mg/L (48 h)	Scenedesmus subspicatus	Algae
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	LC50	0.57 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	0.61 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Hydrocarbons, C10, aromatics, < 1% naphthalene CAS: Non-applicable EC: 918-811-1	Non-applicable	Non-applicable	Non-applicable	28 days
	Non-applicable	Non-applicable	% Biodegradable	50 %
	Non-applicable	Non-applicable	% Biodegradable	50 %
iso-butanol CAS: 78-83-1 EC: 201-148-0	0.4 g O2/g	2.41 g O2/g	100 mg/L	14 days
	0.17	0.17	90 %	90 %
	0.17	0.17	90 %	90 %
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	Non-applicable	Non-applicable	50 mg/L	28 days
	Non-applicable	Non-applicable	4,5 %	4,5 %
	Non-applicable	Non-applicable	4,5 %	4,5 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
	BCF	Pow Log
Abamectin (combination of avermectin B1a and avermectin B1b) (ISO) CAS: 71751-41-2 EC: Non-applicable	56	Moderate
	3	Low
	3	Low
iso-butanol CAS: 78-83-1 EC: 201-148-0	0.76	Low
	0.76	Low
	0.76	Low
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	1365	Very High
	5.1	Very High
	5.1	Very High

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
	Koc	Conclusion	Henry	Dry soil
Abamectin (combination of avermectin B1a and avermectin B1b) (ISO) CAS: 71751-41-2 EC: Non-applicable	5000	Immobilized	1,723E-2 Pa·m <sup>3</sup> /mol	No
	Non-applicable	Non-applicable	Moist soil	No
	Non-applicable	Non-applicable	Moist soil	No

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**BERMECTINE**

**SECTION 12: ECOLOGICAL INFORMATION (continued)**

Identification	Absorption/desorption		Volatility	
iso-butanol CAS: 78-83-1 EC: 201-148-0	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,378E-2 N/m (25 °C)	Moist soil	Non-applicable
2,6-di-tert-butyl-p-cresol CAS: 128-37-0 EC: 204-881-4	Koc	8183	Henry	3,42E-1 Pa·m <sup>3</sup> /mol
	Conclusion		Dry soil	Yes
	Surface tension	1,255E-2 N/m (258,85 °C)	Moist soil	Yes

**12.5 Results of PBT and vPvB assessment:**

Product fails to meet PBT/vPvB criteria

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
07 04 04*	other organic solvents, washing liquids and mother liquors	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP14 Ecotoxic, HP6 Acute Toxicity

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2019 and RID 2019:



- 14.1 UN number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, < 1% naphthalene)
- 14.3 Transport hazard class(es):** 9  
Labels: 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**  
Special regulations: 274, 335, 375, 601  
Tunnel restriction code: Non-applicable  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 38-16:

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**BERMECTINE**

**SECTION 14: TRANSPORT INFORMATION (continued)**



- 14.1 UN number:** UN3082  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, < 1% naphthalene)  
**14.3 Transport hazard class(es):** 9  
**Labels:** 9  
**14.4 Packing group:** III  
**14.5 Environmental hazards:** Yes  
**14.6 Special precautions for user**  
Special regulations: 335, 969, 274  
EmS Codes: F-A, S-F  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L  
Segregation group: Non-applicable  
**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2019:



- 14.1 UN number:** UN3082  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, < 1% naphthalene)  
**14.3 Transport hazard class(es):** 9  
**Labels:** 9  
**14.4 Packing group:** III  
**14.5 Environmental hazards:** Yes  
**14.6 Special precautions for user**  
Physico-Chemical properties: see section 9  
**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable  
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable  
Article 95, REGULATION (EU) No 528/2012: Abamectin (combination of avermectin B1a and avermectin B1b) (ISO) (Product-type 18)  
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c		5000	50000
E1		100	200

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

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## BERMECTINE

### SECTION 15: REGULATORY INFORMATION (continued)

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

#### Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

#### Texts of the legislative phrases mentioned in section 2:

H226: Flammable liquid and vapour

H302: Harmful if swallowed

H318: Causes serious eye damage

H336: May cause drowsiness or dizziness

H304: May be fatal if swallowed and enters airways

H410: Very toxic to aquatic life with long lasting effects

H373: May cause damage to organs through prolonged or repeated exposure (Inhalation)

#### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

#### CLP Regulation (EC) No 1272/2008:

Acute Tox. 1: H330 - Fatal if inhaled

Acute Tox. 2: H300 - Fatal if swallowed

Aquatic Acute 1: H400 - Very toxic to aquatic life

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways

Eye Dam. 1: H318 - Causes serious eye damage

Flam. Liq. 3: H226 - Flammable liquid and vapour

Repr. 2: H361d - Suspected of damaging the unborn child.

Skin Irrit. 2: H315 - Causes skin irritation

STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure

STOT SE 3: H335 - May cause respiratory irritation

STOT SE 3: H336 - May cause drowsiness or dizziness

#### Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

#### Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

#### Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -