

## Safety Data Sheet

according to UK REACH Regulation

### Avermectin B1a

Revision date:

Product code: BI097

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Avermectin B1a

#### Further trade names

(1'R,2R,3S,4'S,6S,8'R,10'E,12'S,13'S,14'E,16'E,20'R,21'R,24'S)-2-[(2S)-butan-2-yl]-21',24'-dihydroxy-12'-[(2R,4S,5S,6S)-5-[(2S,4S,5S,6S)-5-hydroxy-4-methoxy-6-methyloxan-2-yl],oxy-4-methoxy-6-methyloxan-2-yl]oxy-3, 11',13',22'-tetramethylspiro[2,3-dihydropyran-6,6'-3,7,19-trioxatetracyclo[15.6.1.14,8.020,24]pentacosa-10,14,16,22-tetraene]-2'-one

Substance name: avermectin B1a (purity >= 80 %)  
CAS No: 65195-55-3  
Index No: 606-143-00-0  
EC No: 265-610-3

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Reference standard for analysis.

### 1.3. Details of the supplier of the safety data sheet

Company name: WITEGA Laboratorien Berlin-Adlershof GmbH  
Street: James-Franck-Strasse 4  
Place: D-12489 Berlin  
Telephone: +493063922001  
E-mail: witega@witega.de  
Internet: www.witega.de  
Telefax: +493063922007

### 1.4. Emergency telephone number:

+493063922001

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Repr. 2; H361d  
Acute Tox. 1; H330  
Acute Tox. 2; H300  
STOT RE 1; H372  
Aquatic Acute 1; H400 (M-Factor = 10000)  
Aquatic Chronic 1; H410 (M-Factor = 10000)

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

Signal word: Danger

Pictograms:



#### Hazard statements

H300+H330 Fatal if swallowed or if inhaled.  
H361d Suspected of damaging the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P316 Get emergency medical help immediately.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>48</sub>H<sub>72</sub>O<sub>14</sub>

Molecular weight: 873.08 g/mol

#### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
65195-55-3	avermectin B1a (purity >= 80 %)			100 %
	265-610-3	606-143-00-0		
	Repr. 2, Acute Tox. 1, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H361d H330 H300 H372 H400 H410			

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
65195-55-3	265-610-3	avermectin B1a (purity >= 80 %)	100 %
		inhalation: ATE = 0,05 mg/l (vapours); inhalation: ATE = 0,005 mg/l (dusts or mists); oral: ATE = 5 mg/kg STOT RE 1; H372: >= 5 - 100 STOT RE 2; H373: >= 0,5 - < 5 Aquatic Acute 1; H400: M=10000 Aquatic Chronic 1; H410: M=10000	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

##### After contact with skin

Remove contaminated, saturated clothing immediately. Subsequently wash off with: Water and soap

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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#### After ingestion

Rinse mouth immediately and drink plenty of water. Get immediate medical advice/attention.

Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Water spray jet. Foam. Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>).

#### 5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Pyrolysis products, toxic. In case of fire and/or explosion do not breathe fumes.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### General advice

Use personal protection equipment. Do not breathe gas/fumes/vapour/spray.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

##### Other information

Take up dust-free and set down dust-free.

#### 6.4. Reference to other sections

Disposal: see section 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

##### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

##### Advice on general occupational hygiene

Use personal protection equipment.

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

##### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Avoid: UV-radiation/sunlight

##### Further information on storage conditions

storage temperature: 2-8°C

#### 7.3. Specific end use(s)

none

### SECTION 8: Exposure controls/personal protection

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**8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Eye glasses with side protection

**Hand protection**

Wear suitable gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

**Skin protection**

lab coat

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	white
Melting point/freezing point:	156-157 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Water solubility:	No data available
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density:	No data available
Relative vapour density:	No data available

**9.2. Other information****Information with regard to physical hazard classes****Self-ignition temperature**

Solid:

No data available

Gas:

No data available

**Oxidizing properties**

No data available

**Other safety characteristics****Evaporation rate:**

No data available

**SECTION 10: Stability and reactivity**

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**10.1. Reactivity**

Reacts with : Oxidising agent, Alkali (lye), Etchant and acids

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Do not expose to temperatures exceeding 50 °C/122 °F.

**10.5. Incompatible materials**

Oxidising agent, Alkali (lye), Etchant and acids

**10.6. Hazardous decomposition products**

In case of fire may be liberated: Pyrolysis products, toxic.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Fatal if swallowed or if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
65195-55-3	avermectin B1a (purity >= 80 %)				
	oral	ATE 5 mg/kg			
	inhalation vapour	ATE 0,05 mg/l			
	inhalation dust/mist	ATE 0,005 mg/l			

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of damaging the unborn child. (avermectin B1a (purity &gt;= 80 %))

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure. (avermectin B1a (purity &gt;= 80 %))

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

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No data available

#### **12.2. Persistence and degradability**

No data available

#### **12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

#### **12.4. Mobility in soil**

No data available

#### **12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

#### **12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### **12.7. Other adverse effects**

No data available

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### **Disposal recommendations**

Dispose of waste according to applicable legislation.

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

##### **Contaminated packaging**

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

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

##### **14.1. UN number or ID number:**

UN 2588

##### **14.2. UN proper shipping name:**

PESTICIDE, SOLID, TOXIC, N.O.S.

##### **14.3. Transport hazard class(es):**

6.1

##### **14.4. Packing group:**

I

Hazard label:

6.1



Classification code:

T7

Special Provisions:

61 274 648

Limited quantity:

0

Excepted quantity:

E5

Transport category:

1

Hazard No:

66

Tunnel restriction code:

C/E

#### **Inland waterways transport (ADN)**

##### **14.1. UN number or ID number:**

UN 2588

##### **14.2. UN proper shipping name:**

PESTICIDE, SOLID, TOXIC, N.O.S.

##### **14.3. Transport hazard class(es):**

6.1

##### **14.4. Packing group:**

I

Hazard label:

6.1



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Classification code: T7  
Special Provisions: 61 274 648 802  
Limited quantity: 0  
Excepted quantity: E5

#### Marine transport (IMDG)

**14.1. UN number or ID number:** UN 2588  
**14.2. UN proper shipping name:** PESTICIDE, SOLID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** I  
Hazard label: 6.1



Special Provisions: 61 274  
Limited quantity: 0  
Excepted quantity: E5  
EmS: F-A, S-A

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:** UN 2588  
**14.2. UN proper shipping name:** PESTICIDE, SOLID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** I  
Hazard label: 6.1



Special Provisions: A3 A5  
Limited quantity Passenger: Forbidden  
Passenger LQ: Forbidden  
Excepted quantity: E5  
IATA-packing instructions - Passenger: 666  
IATA-max. quantity - Passenger: 5 kg  
IATA-packing instructions - Cargo: 673  
IATA-max. quantity - Cargo: 50 kg

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



#### 14.6. Special precautions for user

No transport as bulk according to IBC Code.

#### 14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

#### Other applicable information

Hazchem code: 2X

### SECTION 15: Regulatory information

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

EU regulatory information

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Restrictions on use (REACH, annex XVII):

Entry 75

#### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

3 - highly hazardous to water

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Abbreviations and acronyms

Acute Tox: Acute toxicity

Repr: Reproductive toxicity

STOT RE: Specific target organ toxicity - repeated exposure

Aquatic Acute: Acute aquatic hazard

Aquatic Chronic: Chronic aquatic hazard

#### Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.

H300+H330 Fatal if swallowed or if inhaled.

H330 Fatal if inhaled.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

#### Further Information

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship. The substances are only for R&D. Do not use as a drug, in household or other applications.