

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 1 of 8

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

### 1.1. Product identifier

Permethrin

#### Further trade names

m-Phenoxybenzyl-(3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane)carboxylate

Substance name: Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate  
CAS No: 52645-53-1  
Index No: 613-058-00-2  
EC No: 258-067-9

### 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      Telefax: +493063922007  
E-mail: witega@witega.de  
Internet: www.witega.de

### 1.4. Emergency telephone number:

+493063922001

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Acute Tox. 4; H332  
Acute Tox. 4; H302  
Skin Sens. 1; H317  
Aquatic Acute 1; H400 (M-Factor = 1000)  
Aquatic Chronic 1; H410 (M-Factor = 1000)

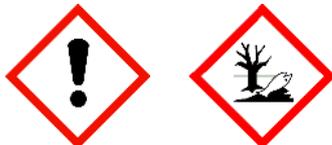
Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

Signal word: Warning

Pictograms:



#### Hazard statements

H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H332 Harmful if inhaled.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 2 of 8

#### Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P262 Do not get in eyes, on skin, or on clothing.  
 P273 Avoid release to the environment.  
 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.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>21</sub>H<sub>20</sub>Cl<sub>2</sub>O<sub>3</sub>  
 Molecular weight: 391.29 g/mol

#### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
52645-53-1	Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate			100 %
	258-067-9	613-058-00-2		
	Acute Tox. 4, Acute Tox. 4, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H332 H302 H317 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		
52645-53-1	258-067-9	Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	100 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: LD50 = 338 mg/kg Aquatic Acute 1; H400: M=1000 Aquatic Chronic 1; H410: M=1000		

### 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.

##### After ingestion

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

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 3 of 8

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

#### **8.1. Control parameters**

#### **8.2. Exposure controls**

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 4 of 8

#### 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:	light yellow	
Melting point/freezing point:		34-35 °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

### 9.2. Other information

#### Information with regard to physical hazard classes

Explosive properties

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

#### Other safety characteristics

Evaporation rate:

No data available

#### Further Information

none

## SECTION 10: Stability and reactivity

### 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

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 5 of 8

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

Harmful if swallowed.

Harmful if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
52645-53-1	Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichorovinyl)-2,2-dimethylcyclopropanecarboxylate				
	oral	LD50 mg/kg	338	Rat	
	dermal	LD50 mg/kg	>2000	Rabbit	
	inhalation vapour	ATE	11 mg/l		
	inhalation dust/mist	ATE	1,5 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

May cause an allergic skin reaction. (Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichorovinyl)-2,2-dimethylcyclopropanecarboxylate)

##### Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Reproductive toxicity: 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

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

##### 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.

No data available

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 6 of 8

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
52645-53-1	Permethrin (ISO); m-phenoxybenzyl 3-(2,2-dichorovinyl)-2,2-dimethylcyclopro panecarboxylate					
	Acute fish toxicity	LC50 mg/l	0.0072	96 h		
	Acute crustacea toxicity	EC50 mg/l	0.00275	48 h		

#### 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 3077

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

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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

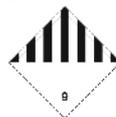
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##### 14.4. Packing group:

III

Hazard label:

9



Classification code:

M7

Special Provisions:

274 335 375 601

Limited quantity:

5 kg

Excepted quantity:

E1

Transport category:

3

Hazard No:

90

Tunnel restriction code:

-

#### Inland waterways transport (ADN)

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

UN 3077

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 7 of 8

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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

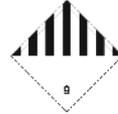
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**14.4. Packing group:**

III

Hazard label:

9



Classification code:

M7

Special Provisions:

274 335 375 601

Limited quantity:

5 kg

Excepted quantity:

E1

**Marine transport (IMDG)**

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

UN 3077

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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

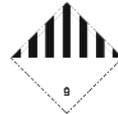
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**14.4. Packing group:**

III

Hazard label:

9



Special Provisions:

274 335 966 967 969

Limited quantity:

5 kg

Excepted quantity:

E1

EmS:

F-A, S-F

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

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

UN 3077

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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

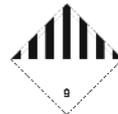
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**14.4. Packing group:**

III

Hazard label:

9



Special Provisions:

A97 A158 A179 A197 A215

Limited quantity Passenger:

30 kg G

Passenger LQ:

Y956

Excepted quantity:

E1

IATA-packing instructions - Passenger:

956

IATA-max. quantity - Passenger:

400 kg

IATA-packing instructions - Cargo:

956

IATA-max. quantity - Cargo:

400 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.

## Safety Data Sheet

according to UK REACH Regulation

### Permethrin

Revision date:

Product code: OP367

Page 8 of 8

## SECTION 15: Regulatory information

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

#### EU regulatory information

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

Skin Sens: Skin sensitisation

Aquatic Acute: Acute aquatic hazard

Aquatic Chronic: Chronic aquatic hazard

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

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

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.