



## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

1/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

### SECTION 1: IDENTIFICATION OF THE HAZARDOUS CHEMICAL AND OF THE SUPPLIER

#### 1.1 Product identifier

**Trade name** K-OTHRINE POLYZONE  
**Product code (UVP)** 79647581

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

**Use** Insecticide

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

**Supplier** Bayer AG  
Kaiser-Wilhelm-Allee 1  
51373 Leverkusen  
Germany

Local distributor  
Bayer Co. (Malaysia) Sdn Bhd  
B-19-1 & B-19-2,  
The Ascent Paradigm,  
No. 1, Jalan SS 7/26A, Kelana  
Jaya,  
47301 Petaling Jaya, Selangor.  
Malaysia

**Telephone** 03 7801 3088 (office hours)

**Telefax** 03 7886 3338

#### 1.4 Emergency telephone no.

**In case of POISONING, please contact** Malaysian Emergency Response Services (999)



**Global Incident Response Hotline (24h)** +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to the Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

Acute toxicity: Category 4  
H332 Harmful if inhaled.

Acute aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1  
H410 Very toxic to aquatic life with long lasting effects.



## K-OTHRINE POLYZONE

Version 3 / MAL  
10200022311

2/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

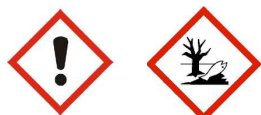
### 2.2 Label elements

Labelling according to the Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Deltamethrin



**Signal word:** Warning

#### Hazard statements

H332 Harmful if inhaled.  
H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P261 Avoid breathing mist/ spray.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor/physician if you feel unwell.  
P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

## SECTION 3: COMPOSITION AND INFORMATION OF THE INGREDIENTS OF THE HAZARDOUS CHEMICAL

### 3.2 Mixtures

#### Chemical nature

Suspension concentrate (=flowable concentrate)(SC)  
Deltamethrin 62,5 g/l

#### Hazardous components

Name	CAS-No.	Conc. [%]
Deltamethrin	52918-63-5	5.90
Alkylethersulfate, sodium salt	68891-38-3	> 1.00 – < 5.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5	> 0.005 – < 0.05
reaction mass of 5-chloro-2- methyl-2H- isothiazol-3-one and 2-methyl-2H-isothiazol-3- one (3:1)	55965-84-9	> 0.0002 – < 0.0015
1,2-Propanediol	57-55-6	< 7
naphthalenesulfonic acid-formaldehyde- polycondensate as sodium salt	36290-04-7	< 2

#### Further information



## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

3/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

Deltamethrin	52918-63-5	M-Factor: 1,000,000 (acute), 1,000,000 (chronic)
1,2-Benzisothiazol-3(2H)-one	2634-33-5	M-Factor: 10 (acute)
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	M-Factor: 100 (acute), 100 (chronic)

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

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

<b>Symptoms</b>	Local:, Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing  Systemic:, discomfort in the chest, tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness
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#### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Risks</b>	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.
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## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

4/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

**Treatment**

Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

#### 5.3 Advice for firefighters

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

**Further information** Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

#### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**Additional advice** Check also for any local site procedures.



## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

5/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

**6.4 Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**Advice on protection against fire and explosion** Keep away from heat and sources of ignition.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

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

**Requirements for storage areas and containers** Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from freezing.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**Suitable materials** HDPE (high density polyethylene)

**7.3 Specific end use(s)** Refer to the label and/or leaflet.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Deltamethrin	52918-63-5	0.01 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

#### 8.2 Exposure controls

##### Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

##### Respiratory protection

If product is handled while not enclosed, and if contact may occur:  
Wear respirator with a particle filter mask (protection factor 10) conforming to European Norm EN149FFP2 or EN140P2 or equivalent.  
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.



## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

6/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

### Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

### Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

### Skin and body protection

Wear standard coveralls and Category 3 Type 6 suit.  
If there is a risk of significant exposure, consider a higher protective type suit.

Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Form	suspension
Colour	light brown
Odour	characteristic
Odour Threshold	No data available
pH	4.0 - 5.0 (100 %) (23 °C) 4.5 - 7.5 (1 %) (23 °C) (deionized water)
Melting point/range	No data available
Boiling Point	No data available
Flash point	No flash point - Determination conducted up to the boiling point.
Flammability	No data available
Auto-ignition temperature	585 °C
Minimum ignition energy	No data available
Self-accelerating decomposition temperature (SADT)	No data available



## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

7/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	1.06 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	miscible
<b>Partition coefficient: n-octanol/water</b>	Deltamethrin: log Pow: 6.4 (25 °C)
<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

**Thermal decomposition** Stable under normal conditions.

**10.2 Chemical stability** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.

**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.

**10.5 Incompatible materials** Store only in the original container.

**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute oral toxicity** LD50 (Rat) > 5,000 mg/kg

**Acute inhalation toxicity** LC50 (Rat) > 2.08 mg/l  
Exposure time: 4 h

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



## K-OTHRINE POLYZONE

Version 3 / MAL  
10200022311

8/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

<b>Skin corrosion/irritation</b>	No skin irritation (Rabbit)
<b>Serious eye damage/eye irritation</b>	No eye irritation (Rabbit)
<b>Respiratory or skin sensitisation</b>	Non-sensitizing. (Guinea pig)

### Assessment STOT Specific target organ toxicity – single exposure

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

### Assessment STOT Specific target organ toxicity – repeated exposure

Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient neurobehavioral effects typical for pyrethroid neurotoxicity.

### Assessment mutagenicity

Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

### Assessment toxicity to reproduction

Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity

Deltamethrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.

### Aspiration hazard

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

### Further information

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 0.15 µg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient deltamethrin.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 0.0131 µg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient deltamethrin.

**Toxicity to aquatic plants** EC50 (Algae) > 9.1 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient deltamethrin.

### 12.2 Persistence and degradability

**Biodegradability** Deltamethrin:





## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

9/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

	Not rapidly biodegradable
<b>Koc</b>	Deltamethrin: Koc: 10240000
<b>12.3 Bioaccumulative potential</b>	
<b>Bioaccumulation</b>	Deltamethrin: Bioconcentration factor (BCF) 1,400 Does not bioaccumulate.
<b>12.4 Mobility in soil</b>	
<b>Mobility in soil</b>	Deltamethrin: Immobile in soil
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT and vPvB assessment</b>	Deltamethrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
<b>12.6 Other adverse effects</b>	
<b>Additional ecological information</b>	No further ecological information is available.

## SECTION 13: DISPOSAL INFORMATION

### 13.1 Waste treatment methods

<b>Product</b>	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
<b>Contaminated packaging</b>	Triple rinse containers. Do not re-use empty containers. Not completely emptied packagings should be disposed of as hazardous waste.

## SECTION 14: TRANSPORT INFORMATION

### ADR/RID/ADN

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Tunnel Code	-

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

### IMDG

14.1 UN number	<b>3082</b>
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## K-OTHRINE POLYZONE

Version 3 / MAL  
102000022311

10/10  
Revision Date: 05.12.2020  
Print Date: 13.01.2021

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(DELTAMETHRIN SOLUTION)

14.3 Transport hazard class(es) 9

14.4 Packaging Group III

14.5 Marine pollutant YES

### IATA

14.1 UN number **3082**

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(DELTAMETHRIN SOLUTION )

14.3 Transport hazard class(es) 9

14.4 Packaging Group III

14.5 Environm. Hazardous Mark YES

### 14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

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## SECTION 15: REGULATORY INFORMATION

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

#### Further information

WHO-classification: U (Unlikely to present acute hazard in normal use)

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## SECTION 16: OTHER INFORMATION

The information contained within this Safety Data Sheet is in accordance to The Industry Code of Practice on Chemical Classification and Hazard Communication 2013 (ICOP) which is promulgated under Section 37 of Occupational Safety and Health Act 1994 (OSHA 1994) and serves as a guidance to chemical suppliers to comply with the provisions of Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 [P.U. (A) 310/2013] which have been gazetted on 11 October 2013, hereinafter is referred to as "the Regulations". This data sheet complements the user's instructions, but does not replace them. The information contained therein is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with the current Malaysia legislation, including the Pesticides Act 1974. Addressees are requested to observe any additional national requirements.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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