



BIOZIDE

Detmolin P "Killgerm"

Revision date: 06.03.2024

Product code: 00434-0127

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

1.1. Product identifier

Detmolin P "Killgerm"

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

Use of the substance/mixture

Pesticide

1.3. Details of the supplier of the safety data sheet

Company name: FROWEIN GmbH & Co. KG

Street: Am Reislebach 83

Place: D-72461 Albstadt

Telephone: +49 (0) 74 32-956 - 0

Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Flam. Liq. 3; H226

Asp. Tox. 1; H304

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C11-C12, isoalkanes, 2% aromatics

Piperonyl butoxide

Pyrethrum

Signal word:

Danger

Pictograms:



Hazard statements

H226

Flammable liquid and vapour.

H304

May be fatal if swallowed and enters airways.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210

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

P260

Do not breathe spray.

P262

Do not get in eyes, on skin, or on clothing.

P284

In case of inadequate ventilation wear respiratory protection.



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P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P405	Store locked up.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to in accordance with local and national regulations.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation in aliphatic hydrocarbons

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
	Hydrocarbons, C11-C12, isoalkanes, 2% aromatics			< 100 %
	918-167-1		01-2119472146-39	
	Flam. Liq. 3, Asp. Tox. 1, Aquatic Chronic 4; H226 H304 H413 EUH066			
51-03-6	Piperonyl butoxide			2,5 - 5 %
	200-076-7	604-096-00-0	01-2119537431-46	
	Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H319 H335 H400 H410 EUH066			
8003-34-7	Pyrethrum			< 1 %
	232-319-8			
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H332 H312 H302 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	
51-03-6	200-076-7	Piperonyl butoxide	2,5 - 5 %
		Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1	
8003-34-7	232-319-8	Pyrethrum	< 1 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg; oral: ATE = 500 mg/kg Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100	



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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

After contact with skin

Wash off immediately with plenty of water and soap for at least 15 minutes.
Consult a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult (eye) doctor immediately.

After ingestion

Summon a doctor immediately.
Do not induce vomiting.
Immediately give plenty of water (if possible charcoal slurry).
Induce vomiting only upon the advice of a physician.
Attention. Beware, danger of aspiration.

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

May be fatal if swallowed and enters airways.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Fire may produce:
carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Cool containers at risk with water spray jet.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Vapours are heavier than air and spread along ground.
Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures



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General advice

- Use only explosion-proof equipment.
- Ensure adequate ventilation.
- Remove persons to safety.

For non-emergency personnel

- Do not breathe vapours.
- Avoid contact with skin, eyes and clothing.

For emergency responders

- In case of vapour formation use respirator.
- Use personal protective clothing.

6.2. Environmental precautions

- Do not discharge into the drains/surface waters/ground water.
- Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

For containment

- Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
- Shovel into suitable container for disposal.
- Clean contaminated surface thoroughly.

6.4. Reference to other sections

- Observe protective instructions (see Sections 7 and 8).
- Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Keep container tightly closed.
- Vapours are heavier than air and spread along ground.
- Avoid contact with the skin and the eyes.
- In case of insufficient ventilation, especially in confined areas.
- Do not breathe vapours or spray mist.

Advice on protection against fire and explosion

- Do not smoke - volatile.
- Keep away from heat and sources of ignition.
- Take precautionary measures against static discharges.
- Pay attention to anti-explosion rules.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed in a dry, cool and well-ventilated place.
- Pay attention to anti-explosion rules.

Hints on joint storage

- Incompatible with oxidizing agents.

Further information on storage conditions

- Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

- Pesticide



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
8003-34-7	Pyrethrum (purified of sensitising lactones)	-	1		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Treat subsequently with skin cream.

Take off immediately all contaminated clothing.

Avoid contact with skin, eyes and clothing.

Eye/face protection

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

Hand protection

Protective gloves resistant to chemicals made of nitrile, minimum coat thickness 0.4 mm, permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Camatril Velours 730> made by www.kcl.de.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Wear standard protective suit (plant protection) when spreading/handling the product (CE 93 0120).

Wide brimmed headgear made of strong cloth

Rubber apron (EN 467).

Respiratory protection

Use protective face mask with A1-P3 (40 ASt) filter when spraying (EN 14387). (EN 141)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellowish
Odour:	Hydrocarbon-like

Test method

pH-Value: n.d.

Changes in the physical state

Melting point/freezing point: n.d.

Boiling point or initial boiling point and boiling range: 150 - 220 °C *)



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Sublimation point:	n.a.
Softening point:	n.d.
Flash point:	> 40 °C ASTM D 93
Sustaining combustion:	Sustaining combustion

Flammability

Solid/liquid:	n.a.
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Explosive properties

The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated.

Lower explosion limits:	0,6 vol. % *)
Upper explosion limits:	7 vol. % *)
Auto-ignition temperature:	> 200 °C *)

Self-ignition temperature

Solid:	n.a.
Gas:	n.a.

Decomposition temperature:	n.d.
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Oxidizing properties

Not oxidising.

Vapour pressure: (at 25 °C)	5 hPa *)
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Density (at 20 °C):	0,772 g/cm ³
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Bulk density:	n.a.
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Water solubility: (at 20 °C)	Immiscible
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Solubility in other solvents

n.d.

Partition coefficient n-octanol/water:	n.d.
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Viscosity / dynamic:	n.d.
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Viscosity / kinematic:	n.d.
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Flow time:	n.d.
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Relative vapour density:	n.d.
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Evaporation rate:	n.d.
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Solvent separation test:	n.d.
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Solvent content:	approx. 95%
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9.2. Other information

*) Hydrocarbons, C11-C12, isoalkanes, 2% aromatics

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with oxidizing agents.



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10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.
Vapour/air mixtures are explosive at intensive warming.
Heating can release vapours which can be ignited.

10.5. Incompatible materials

oxidizing agents

10.6. Hazardous decomposition products

No hazardous decomposition products known.

Fire may produce:

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No. 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.
No toxicological data available.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Irritation and corrosivity

Based on available data, the classification criteria are not met.
Repeated exposure may cause skin dryness or cracking.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

May be fatal if swallowed and enters airways.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

Contact with eyes may cause irritation.

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.

Occasionally literature hints report that contact with Pyrethrum compounds may trigger hay fever similar reactions in particularly sensible persons.

SECTION 12: Ecological information



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12.1. Toxicity

Ecological data are not available.
Very toxic to aquatic life with long lasting effects.
Piperonyl butoxide
LC50/Cyprinodon variegatus/96 h = 3,94 mg/l
EC50/Daphnia magna/48 h = 0,51 mg/l
EC50/Algae/72 h > 9,1 mg/l

Pyrethrum
LC50/Rainbow trout/96 h = 0,0052 mg/l

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Severe hazard to waters

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Where possible recycling is preferred to disposal.
Can be incinerated, when in compliance with local regulations.

List of Wastes Code - residues/unused products

200119 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Pesticides; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Re-using the polluted packaging materials is not allowed.
Contaminated packagings are to be treated like the product itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 3295

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14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E1

Transport category: 3

Hazard No: 30

Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 3295

14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 3295

14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S. (Piperonyl butoxide)

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3



Marine pollutant: Yes

Limited quantity: 5 L / 30 kg

Excepted quantity: E1

EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3295

14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3

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Limited quantity Passenger:	10 L	
Passenger LQ:	Y344	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		355
IATA-max. quantity - Passenger:		60 L
IATA-packing instructions - Cargo:		366
IATA-max. quantity - Cargo:		220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Maritime transport in bulk according to IMO instruments

The transport takes place only in approved and appropriate packaging.

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 3, Entry 40, Entry 75

Directive 2004/42/EC on VOC in
paints and varnishes: > 95%

Information according to Directive
2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

Additional information: E1

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

Changes

This data sheet contains changes from the previous version in section(s): 2.

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Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 IMDG = International Maritime Code for Dangerous Goods
 IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
 MARPOL = International Convention for the Prevention of Pollution from Ships
 IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
 CAS = Chemical Abstract Service
 EN = European norm
 ISO = International Organization for Standardization
 DIN = Deutsche Industrie Norm
 PBT = Persistent Bioaccumulative and Toxic
 vPvB = Very Persistent and very Bio-accumulative
 LD = Lethal dose
 LC = Lethal concentration
 EC = Effect concentration
 IC = Median immobilisation concentration or median inhibitory concentration

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Asp. Tox. 1; H304	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

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(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)