

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

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

1.1 Product identifier

Trade name	:	K-OBIOL UL60 1X20L
Product code	:	UVP: 05939666 Specification: 102000002618
Unique Formula Identifier (UFI)	:	6T41-D0AM-N003-06A4

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

Use of the Sub-stance/Mixture	:	Insecticide, Plant protection agent
Recommended restrictions on use	:	Not applicable

1.3 Details of the supplier of the safety data sheet

Company	:	2022 Environmental Science FR S.A.S. 1 Place Giovanni Da Verrazzano 69009 Lyon, France
Telephone	:	+33 451 081 508
E-mail address of person responsible for the SDS	:	service.clients.es.france@envu.com

1.4 Emergency telephone number

+30 21 0779 3777

For Emergency or Spill call:
+30 21 1176 8478 (24/7 multilingual support)

Τηλέφωνο Έκτακτης Ανάγκης Κέντρο Δηλητηριάσεων: 0030 210 7793777

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
---	-----------------------------------

Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.
--	---

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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/information on ingredients

3.2 Mixtures

Chemical nature : Ultra-low volume (ULV) liquid (UL)

Components

Chemical name	CAS-No.	Classification	Concentration
---------------	---------	----------------	---------------

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version 5.3 Revision Date: 20.01.2026 SDS Number: 11180496-00011 Date of last issue: 13.01.2026
Date of first issue: 13.03.2023

	EC-No. Index-No. Registration number		(% w/w)
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO)	51-03-6 200-076-7 604-096-00-0 01-2119537431-46	Eye Irrit. 2; H319 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH066 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	6,0444
Deltamethrin	52918-63-5 258-256-6 607-319-00-X	Acute Tox. 3; H301 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1.000.000 M-Factor (Chronic aquatic toxicity): 1.000.000 Acute toxicity estimate Acute oral toxicity: 87 mg/kg	0,6698

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	No information available. Skin and eye paraesthesia which may be severe Usually transient with resolution within 24 hours The product causes irritation of eyes, skin and mucous membranes. Cough sneezing 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 muscle twitching Dizziness
Risks	:	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

4.3 Indication of any immediate medical attention and special treatment needed

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.
-----------	---	--

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

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 available.
In case of skin irritation, application of oils or lotions containing vitamin E may be considered.
Recovery is spontaneous and without sequelae.
No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Avoid inhalation of vapour or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contami-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

nated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Gases

7.3 Specific end use(s)

Specific use(s) : Refer to the label and/or leaflet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO)	Workers	Inhalation	Long-term systemic effects	3,875 mg/m3
	Workers	Inhalation	Acute systemic effects	7,75 mg/m3
	Workers	Inhalation	Long-term systemic effects	3,875 mg/m3
	Workers	Inhalation	Acute local effects	3,875 mg/m3
	Workers	Skin contact	Long-term systemic effects	27,7 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	55,5 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0,44 mg/cm2
	Workers	Skin contact	Acute local effects	0,888 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	1,94 mg/m3
	Consumers	Inhalation	Acute systemic effects	3,875 mg/m3
	Consumers	Inhalation	Long-term local effects	1,94 mg/m3
	Consumers	Inhalation	Acute local effects	1,94 mg/m3
	Consumers	Skin contact	Long-term systemic effects	13,9 mg/kg bw/day

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version 5.3 Revision Date: 20.01.2026 SDS Number: 11180496-00011 Date of last issue: 13.01.2026
Date of first issue: 13.03.2023

	Consumers	Skin contact	Acute systemic effects	27,8 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0,22 mg/cm2
	Consumers	Skin contact	Acute local effects	0,22 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	1,14 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	2,3 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO)	Fresh water	0,001 mg/l
	Marine water	0,0001 - 0,000148 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,019 mg/kg
	Marine sediment	0,0002 mg/kg
	Soil	0,016 mg/kg
	Oral (Secondary Poisoning)	12,53 mg/kg food
Deltamethrin	Fresh water	0,0007 µg/l
	Fresh water sediment	0,0062 mg/kg dry weight (d.w.)
	Sewage treatment plant	30 µg/l

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety glasses
Equipment should conform to EAOT EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0,4 mm
Guideline : Equipment should conform to EAOT EN 374

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

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.

Skin and body protection : Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter should conform to EAOT EN 14387

Filter type : Organic vapour type (A)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid (20 °C)
Form	: liquid
Colour	: colourless, light yellow
Odour	: characteristic, very faint
Odour Threshold	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Flash point : > 137,00 °C

Auto-ignition temperature : 245 °C

Decomposition temperature : No data available

pH : 4,5 (23 °C)
Concentration: 1 %
deionised water

Viscosity
Viscosity, kinematic : No data available

Solubility(ies)
Water solubility : immiscible

Partition coefficient: n-
octanol/water : Not applicable

Vapour pressure : No data available

Density : 0,88 g/cm³ (20,00 °C)

Relative vapour density : No data available

Particle characteristics
Particle size : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Surface tension : 29,50 mN/m, 20 °C

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 4.000 mg/kg

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): > 5,2 mg/l
Exposure time: 4 h

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402

Deltamethrin:

Acute oral toxicity : LD50 (Rat, female): 87 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0,6 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

Deltamethrin:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : No eye irritation

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritation to eyes, reversing within 21 days

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Deltamethrin:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Test Type	:	Magnusson-Kligman-Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Deltamethrin:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)
	:	Result: negative

Deltamethrin:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)
	:	Result: negative

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 473
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Method: OECD Test Guideline 482
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species	: Rat
Application Route	: Ingestion
Exposure time	: 107 weeks
Method	: OECD Test Guideline 451
Result	: negative

Deltamethrin:

Species	: Rat
Application Route	: Ingestion
Method	: OECD Test Guideline 453
Result	: negative

Reproductive toxicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
----------------------	---

Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative
-------------------------------	--

Deltamethrin:

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative
----------------------	--

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

Deltamethrin:

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species : Rat
NOAEL : 1.323 mg/kg
Application Route : Ingestion
Exposure time : 7 Weeks

Deltamethrin:

Species : Dog
NOAEL : 1 mg/kg
LOAEL : 10 mg/kg
Application Route : Ingestion
Exposure time : 52 Weeks
Method : OECD Test Guideline 452

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Not classified based on available information.

Product:

Assessment : The substance/mixture does not contain components consid-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

ered to have endocrine disrupting properties according to
REACH Article 57(f) or Commission Delegated regulation
(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at
levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,00015 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
		LC50 (Cyprinodon variegatus (sheepshead minnow)): 3,94 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,0131 µg/l Exposure time: 48 h Remarks: Based on data from similar materials
		EC50 (Daphnia magna (Water flea)): 0,51 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EC50 : > 9,1 mg/l Exposure time: 96 h Remarks: Based on data from similar materials

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Toxicity to fish	:	LC50 (Cyprinodon variegatus (sheepshead minnow)): 3,94 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,51 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 3,89 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (green algae)): 0,824 mg/l Exposure time: 72 h

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 : > 1.000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0,18 mg/l
Exposure time: 35 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,03 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1

Deltamethrin:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,15 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Gammarus fasciatus (freshwater shrimp)): 0,0003 µg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Chlorella vulgaris (Fresh water algae)): > 0,47 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 1.000.000

Toxicity to microorganisms : EC50 (activated sludge): > 0,3 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 0,017 µg/l
Exposure time: 260 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,0041 µg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1.000.000

Ecotoxicology Assessment

Chronic aquatic toxicity : M-factor: 1000000
Remarks: Based on national or regional regulation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

12.2 Persistence and degradability

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Deltamethrin:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Partition coefficient: n- : log Pow: 5
octanol/water

Deltamethrin:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1.400

Partition coefficient: n- : log Pow: 6,4
octanol/water

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer.
- Residues of the biocidal product must be disposed of in accordance with the provisions of the Biocidal Products Regulation (BPR, Regulation (EU) 528/2012), the Waste Framework Directive (WFD, Directive 2008/98/EC) and in the European Waste Catalogue (EWC) as well as in national and regional regulations.
- Contaminated packaging : Follow advice on product label and/or leaflet.
Empty containers retain residue and can be dangerous.
Do not re-use empty containers.
- Waste Code : The following Waste Codes are only suggestions:
- used product
02 01 08*, agrochemical waste containing hazardous substances
- unused product
02 01 08*, agrochemical waste containing hazardous substances
- uncleaned packagings
15 01 10*, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

- ADN : UN 3082
- ADR : UN 3082
- RID : UN 3082

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Deltamethrin)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Deltamethrin)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Deltamethrin)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Deltamethrin, 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether
(Piperonyl butoxide/PBO))

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Deltamethrin)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 9	
ADR	: 9	
RID	: 9	
IMDG	: 9	
IATA	: 9	

14.4 Packing group

ADN
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, : Conditions of restriction for the following entries should be consi-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

mixtures and articles (Annex XVII)

dered:
Number on list 3

Number on list 75: If you intend to
use this product as tattoo ink, please
contact your vendor.

Substance(s) or mixture(s) are listed
here according to their appearance
in the regulation, irrespective of their
use/purpose or the conditions of the
restriction. Please refer to the condi-
tions in corresponding Regulation to
determine whether an entry is appli-
cable to the placing on the market or
not.

REACH - Candidate List of Substances of Very High
Concern for Authorisation (Article 59). : Not applicable

Regulation (EU) No 2024/590 on substances that deple-
te the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-
tants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parlia-
ment and the Council concerning the export and import
of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation
(Annex XIV) : Not applicable

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

Product Type : Insecticides, acaricides and products to control other arthro-
pods

Active substance : 6 g/l
Deltamethrin

54 g/l
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl
butoxide/PBO)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of
major-accident hazards involving dangerous substances.

E1	ENVIRONMENTAL HAZARDS	Quantity 1 100 t	Quantity 2 200 t
----	--------------------------	---------------------	---------------------

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H301	: Toxic if swallowed.
H319	: Causes serious eye irritation.
H331	: Toxic if inhaled.
H335	: May cause respiratory irritation.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
EUH066	: Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



K-OBIOL UL60 1X20L

Version	Revision Date:	SDS Number:	Date of last issue: 13.01.2026
5.3	20.01.2026	11180496-00011	Date of first issue: 13.03.2023

- Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

GR / EN