

SAFETY DATA SHEET



PERMECTRIN® II

Version 1.0 Revision Date: 06/23/2020 SDS Number: 122000008520 Date of last issue: -
Date of first issue: 23.06.2020

SECTION 1. IDENTIFICATION

Product information

Product Name : PERMECTRIN® II
SDS Number : 122000008520

Use : Pesticide

Company

Elanco US Inc.
2500 Innovation Way
Greenfield, IN 46140
USA
+1-877-Elanco1(+1-877-3526261)
elanco_sds@elanco.com


In case of emergency: CHEMTREC International: +1 703-527-3887 (24 hours)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4
Acute toxicity (Oral) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitisation : Category 1
Germ cell mutagenicity : Category 1B
Carcinogenicity : Category 1B

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H227 Combustible liquid.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H340 May cause genetic defects.
H350 May cause cancer.

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Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Permethrin	52645-53-1	10
Nonionic surfactant	Not Assigned	6,5
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8	2,2
n-Butanol	71-36-3	1,5
Solvent naphtha (petroleum), light arom.	64742-95-6	1

SECTION 4. FIRST AID MEASURES

General advice : Take off all contaminated clothing immediately.

If inhaled : Remove to fresh air.
Call a physician immediately.

In case of skin contact : After contact with skin, wash immediately with plenty of soap and water.
If skin reactions occur, contact a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : In case of accidental ingestion, contact your regional poison center or physician immediately.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : No information available.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Fire may cause evolution of:
Carbon monoxide (CO)
Carbon dioxide (CO₂)
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. No special precautions required.
- Methods and materials for containment and cleaning up : Cover spilled product with liquid-binding material (sand, silica gel, acid binder, universal binder, hybilat). Take up mechanically and fill into labeled, closable containers.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : No special protective measures against fire required.
- Advice on safe handling : Avoid formation of aerosol. Use with local exhaust ventilation. Avoid contact with skin, eyes and clothing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Permethrin	52645-53-1	SUP	10 mg/m ³	
n-Butanol	71-36-3	TWA	20 ppm	ACGIH
		TWA	20 ppm	ACGIH
		C	50 ppm 150 mg/m ³	NIOSH REL
		C	50 ppm 150 mg/m ³	NIOSH REL
		TWA	100 ppm	OSHA Z-1

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			300 mg/m ³	
		TWA	100 ppm 300 mg/m ³	OSHA Z-1
		C	50 ppm 150 mg/m ³	OSHA P0
		C	50 ppm 150 mg/m ³	OSHA P0
Solvent naphtha (petroleum), light arom.	64742-95-6	TWA	500 ppm 2.000 mg/m ³	OSHA Z-1
		TWA	500 ppm 2.000 mg/m ³	OSHA Z-1
		TWA	200 mg/m ³ (total hydrocarbon vapor)	ACGIH
		TWA	200 mg/m ³ (total hydrocarbon vapor)	ACGIH
		TWA	400 ppm 1.600 mg/m ³	OSHA P0
		TWA	400 ppm 1.600 mg/m ³	OSHA P0

Personal protective equipment

- Respiratory protection : Recommended Filter type:
Organic vapor with prefilter

None required for consumer use of this product.
- Hand protection
Material : Chemically resistant gloves.
- Remarks : None required for consumer use of this product.
- Eye protection : Safety glasses
None required for consumer use of this product.
- Protective measures : Wear suitable protective equipment.
Please consult label for end-user requirements.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : Light yellow to yellow
- Odour : oily
- pH : 4,86
Concentration: 10 g/l
- Boiling point/boiling range : 230 °F / 110 °C
- Flash point : 151 °F / 66 °C

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Density : 0,859 g/cm³
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Explosive properties : No statements available.
Oxidizing properties : No data available
Impact sensitivity : No data available
Minimum ignition energy : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No data available
Chemical stability : No data available
Possibility of hazardous reactions : No data available
Conditions to avoid : No data available
Incompatible materials : Oxidizing agents
Hazardous decomposition products : Carbon monoxide (CO)
Carbon dioxide (CO₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate (ATE): 962,66 mg/kg
Method: Calculation method
Acute inhalation toxicity : Acute toxicity estimate (ATE): 23 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol
Method: Calculation method
Acute dermal toxicity : Acute toxicity estimate (ATE): > 5.000 mg/kg
Method: Calculation method

Components:

Permethrin:

Acute oral toxicity : LD50 (Rat): 430 mg/kg

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Acute inhalation toxicity : LC50 (Rat): 2,3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol

Acute dermal toxicity : LD50 (Rat): > 2.500 mg/kg

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD 401
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute dermal toxicity : LD50 (Rat): > 1.000 - 1.600 mg/kg
Method: OECD 402
Assessment: The component/mixture is moderately toxic after single contact with skin.

n-Butanol:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Components:

Permethrin:

Species : Rabbit
Result : No skin irritation

Nonionic surfactant:

Result : Causes skin irritation.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species : Rabbit
Exposure time : 4 h
Method : OECD 404
Result : Irritating to skin.

n-Butanol:

Species : Rabbit
Method : OECD 404
Result : Irritating to skin.

Serious eye damage/eye irritation

Components:

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Result : Irritating to eyes.
Exposure time : 1 - 14 d

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n-Butanol:

Species : Rabbit
Result : Risk of serious damage to eyes.
Method : OECD 405

Respiratory or skin sensitisation**Components:****Permethrin:**

Result : May cause sensitisation by skin contact.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species : Guinea pig
Method : OECD 406
Remarks : Did not cause sensitisation on laboratory animals.

n-Butanol:

Test Type : Skin sensitisation
Species : Guinea pig
Method : OECD 406
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Components:****Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative

n-Butanol:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Test Type: Micronucleus test
Result: negative

Test Type: In vitro gene mutation study in mammalian cells
Test system: Hamster V79-cells
Method: OECD 476
Result: No evidence of a genotoxic effect.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD 474
Result: No evidence of a genotoxic effect.

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Solvent naphtha (petroleum), light arom.:

Germ cell mutagenicity - Assessment : In vivo tests showed mutagenic effects

Carcinogenicity**Components:****Solvent naphtha (petroleum), light arom.:**

Carcinogenicity - Assessment : Possible human carcinogen

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Components:****Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Effects on fertility : Result: Animal testing did not show any effects on fertility.
Remarks: Data on a comparable substance

Effects on foetal development : Species: Mouse, female
Application Route: Oral
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 2 mg/kg body weight
Teratogenicity: NOAEL: 300 mg/kg body weight
Result: No indication of teratogenic effects.
Remarks: Data on a comparable substance

STOT - single exposure**Components:****Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

n-Butanol:

Assessment : May cause respiratory irritation.

Exposure routes : Inhalation
Assessment : May cause drowsiness or dizziness.

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STOT - repeated exposure

Components:

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species : Rat, male and female
NOAEL : 50 mg/kg
LOAEL : 250 mg/kg
Application Route : Oral
Exposure time : 3 month
Number of exposures : Once daily
Remarks : Subacute toxicity
Argument by analogy

Species : Rat, male and female
NOAEL : 85 mg/kg
LOAEL : 145 mg/kg
Application Route : Oral
Exposure time : 9 months
Number of exposures : Once daily
Remarks : Subchronic toxicity
Argument by analogy

Aspiration toxicity

Components:

n-Butanol:

May be harmful if swallowed and enters airways.

Solvent naphtha (petroleum), light arom.:

May be fatal if swallowed and enters airways.

Experience with human exposure

Components:

n-Butanol:

General Information : May cause skin irritation and/or dermatitis.

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Further information

Components:

Permethrin:

Pharmaceutic effects

Remarks : Insecticide

Remarks : 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).

n-Butanol:

Remarks : Liver and kidney injuries may occur.

Remarks : After absorption of large quantities
Dizziness
Liver disorders
drowsiness
Headache
Weakness

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Permethrin:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,00017 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50: 0,5 mg/l
Exposure time: 72 h

Nonionic surfactant:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 10 - 100 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity
Method: OECD 203
Remarks: Nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 56 - 100 mg/l
Exposure time: 48 h
Method: OECD 202
Remarks: Nominal concentration

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- Toxicity to algae/aquatic plants : NOEC (Selenastrum Capricornutum (Green algae)): 0,5 mg/l
Exposure time: 96 h
Test substance: Argument by analogy
Remarks: Nominal concentration
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0,23 mg/l
Exposure time: 72 d
Analytical monitoring: yes
Test substance: Argument by analogy
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1,18 mg/l
Exposure time: 21 d
Analytical monitoring: yes
Test substance: Data on a comparable substance
Method: OECD 211
- Toxicity to microorganisms : EC50 (Photobacterium phosphoreum): 1.225 mg/l
Exposure time: 0,25 h
Method: OECD 209
- Toxicity to soil dwelling organisms : EC50 (Eisenia fetida (earthworms)): > 1.000 mg/kg
Exposure time: 14 d
Method: OECD 207

Ecotoxicology Assessment

- Acute aquatic toxicity : Toxic to aquatic life.
- Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

n-Butanol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1.730 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.983 mg/l
Exposure time: 48 h

Solvent naphtha (petroleum), light arom.:

Ecotoxicology Assessment

- Acute aquatic toxicity : No relevant data for classification available.

Persistence and degradability

Components:

Permethrin:

- Biodegradability : Result: Not rapidly biodegradable
Biodegradation: 0 %
Testing period: 7 d
Exposure time: 28 d
Kinetic:
7 d: 0 %

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14 d: 0 %
21 d: 0 %
28 d: 0 %

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Biodegradability : Result: Not rapidly biodegradable
Biodegradation: 2,9 %
Method: OECD 301E

n-Butanol:

Biodegradability : Result: rapidly biodegradable
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD 301E

Bioaccumulative potential

Components:

Permethrin:

Partition coefficient: n-octanol/water : log Pow: 5,95

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Bioaccumulation : Bioconcentration factor (BCF): 3,16
Remarks: Does not bioaccumulate.

n-Butanol:

Partition coefficient: n-octanol/water : log Pow: 1
Method: OECD 117

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Do not allow to enter surface waters or groundwater.

Components:

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Results of PBT and vPvB assessment : This substance is not considered to be very persistent and very bioaccumulating (vPvB). This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic.

However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN)
Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

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.

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SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
n-Butanol	71-36-3	100	100 (F003)
n-Butanol	71-36-3	100	100 (F003)
n-Butanol	71-36-3	5000	*
n-Butanol	71-36-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Germ cell mutagenicity
Carcinogenicity

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Permethrin	52645-53-1	9,9999 %
n-Butanol	71-36-3	1,5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

n-Butanol	71-36-3	1,5 %
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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

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US State Regulations

Massachusetts Right To Know

Permethrin 52645-53-1
n-Butanol 71-36-3

Pennsylvania Right To Know

Distillates (petroleum), straight-run middle 64741-44-2
n-Butanol 71-36-3
Solvent naphtha (petroleum), light arom. 64742-95-6
1,2,4-Trimethylbenzene 95-63-6

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

New York City Hazardous Substances

Distillates (petroleum), straight-run middle 64741-44-2
n-Butanol 71-36-3
Solvent naphtha (petroleum), light arom. 64742-95-6
1,2,4-Trimethylbenzene 95-63-6

California List of Hazardous Substances

n-Butanol 71-36-3

California Permissible Exposure Limits for Chemical Contaminants

n-Butanol 71-36-3

International Regulations

Montreal Protocol (Ozone Depleting Substances) : Not applicable

Rotterdam Convention (Prior Informed Consent) : Not applicable

Stockholm Convention (Persistent Organic Pollutants) : Not applicable

The components of this product are reported in the following inventories:

TSCA : Substance(s) not listed on TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

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Health - 2 Flammability - 2 Instability - 0 Others -

HMIS® IV:

Health - 2 Flammability - 2 Instability - 0 Others -

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
1910.1000
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-
its for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average
NIOSH REL / C : Ceiling value not be exceeded at any time.
OSHA P0 / TWA : 8-hour time weighted average
OSHA P0 / C : Ceiling limit
OSHA Z-1 / TWA : 8-hour time weighted average

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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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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