

## 1 Identification

- **Product identifier**
- **Product Name:** Permethrin
- **Part Name:** S-3000
- **Application of the substance / the mixture** For Laboratory Use Only
- **Uses advised against** Not for Human or Animal Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spex CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA  
732-549-7144  
USMet-CRMSales@antylia.com
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS07

Eye Irritation 2A

H319 Causes serious eye irritation.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure 3

H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

acetone

permethrin (ISO)

- **Hazard statements**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

- **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

**Product Name: Permethrin**

(Contd. of page 1)

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



**HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

67-64-1	acetone	99.9%
52645-53-1	permethrin (ISO)	0.1%

**4 First-aid measures**

**Description of first aid measures**

**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Do not give anything to eat or drink - Do not induce vomiting

**Information for Doctor:**

**Most important symptoms and effects, both acute and delayed** No further relevant information available.

**Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**5 Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing agents:** CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture** No further relevant information available.

**Advice for firefighters**

**Protective equipment:** No special measures required.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

(Contd. on page 3)

Product Name: Permethrin

(Contd. of page 2)

**Protective Action Criteria for Chemicals**

<b>· PAC-1:</b>	
67-64-1 acetone	200 ppm
<b>· PAC-2:</b>	
67-64-1 acetone	3200* ppm
<b>· PAC-3:</b>	
67-64-1 acetone	5700* ppm

**7 Handling and storage**

- Handling:**
- Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities**
- Storage:**
- Requirements to be met by storerooms and receptacles:** Store in a cool location.
- Information about storage in one common storage facility:** Not required.
- Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- Additional information about design of technical systems:** No further data; see section 7.
- Control parameters**
- Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

<b>67-64-1 acetone</b>	
PEL	Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 590 mg/m <sup>3</sup> , 250 ppm
TLV	Short-term value: 500 ppm Long-term value: 250 ppm A4, BEI

**· Ingredients with biological limit values:**

<b>67-64-1 acetone</b>	
BEI	25 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

- Additional information:** The lists that were valid during the creation were used as basis.
- Exposure controls**
- Personal protective equipment:**
- General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

(Contd. on page 4)

**Product Name: Permethrin**

(Contd. of page 3)

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**

<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance:</b>	
Form:	Liquid
Color:	According to product specification
Odor:	Characteristic
Odour Threshold:	Not applicable.
pH-value:	Not applicable.
<b>Change in condition</b>	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	55.8-56.6 °C (132.4-133.9 °F)
Flash point:	< 0 °C (< 32 °F)
Flammability (solid, gaseous):	Highly flammable.
Auto igniting:	465 °C (869 °F)
Decomposition temperature:	Not applicable.
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
<b>Explosion limits:</b>	
Lower:	2.6 Vol %
Upper:	13 Vol %
Vapor pressure at 20 °C (68 °F):	233 hPa (174.8 mm Hg)
Vapor pressure at 50 °C (122 °F):	800 hPa (600 mm Hg)
Density at 20 °C (68 °F)	0.7904-0.79048 g/cm <sup>3</sup> (6.59589-6.59656 lbs/gal)
Relative density	Not applicable.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
<b>Solubility in / Miscibility with</b>	
Water:	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b> Not applicable.	
<b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
<b>Solvent content:</b>	
Organic solvents:	99.9 %
VOC content:	0.00 %
Solids content:	0.1 %
<b>Other information</b> No further relevant information available.	

**10 Stability and reactivity**

**Reactivity** No further relevant information available.

**Chemical stability**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

(Contd. on page 5)

**Product Name: Permethrin**

(Contd. of page 4)

- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**67-64-1 acetone**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

52645-53-1 | permethrin (ISO)

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.





**14 Transport information**

· <b>UN-Number</b>	
· <b>DOT, ADR, IMDG, IATA</b>	UN1090
· <b>UN proper shipping name</b>	
· <b>DOT</b>	Acetone
· <b>ADR</b>	1090 ACETONE, ENVIRONMENTALLY HAZARDOUS
· <b>IMDG, IATA</b>	ACETONE

(Contd. on page 6)

Product Name: Permethrin

(Contd. of page 5)

· <b>Transport hazard class(es)</b>	
· <b>DOT</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
-----	
· <b>ADR</b>	
 	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
-----	
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
-----	
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b> II	
· <b>Environmental hazards:</b>	
· <b>Special marking (ADR):</b> Symbol (fish and tree)	
· <b>Special precautions for user</b> Warning: Flammable liquids	
· <b>Hazard identification number (Kemler code):</b> 33	
· <b>EMS Number:</b> F-E,S-D	
· <b>Stowage Category</b> E	
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> Not applicable.	
· <b>Transport/Additional information:</b>	
-----	
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
-----	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
-----	
· <b>UN "Model Regulation":</b> UN 1090 ACETONE, 3, II, ENVIRONMENTALLY HAZARDOUS	

**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture** No further relevant information available.  
· **Sara**

· **Section 313 (Specific toxic chemical listings):**

52645-53-1 | permethrin (ISO)

· **TSCA (Toxic Substances Control Act):**

67-64-1 | acetone

ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

(Contd. on page 7)

Printing date 08/29/2023

Reviewed on 08/29/2023

Product Name: Permethrin

(Contd. of page 6)

· <b>Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	
· <b>Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
· <b>Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	
· <b>Carcinogenic categories</b>	
· <b>EPA (Environmental Protection Agency)</b>	
67-64-1	acetone <span style="float: right;">I</span>
· <b>TLV (Threshold Limit Value)</b>	
67-64-1	acetone <span style="float: right;">A4</span>
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
None of the ingredients is listed.	

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02      GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

acetone

permethrin (ISO)

· **Hazard statements**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** product safety department

· **Contact:**

Spex CertiPrep, LLC.

1-732-549-7144

· **Date of preparation / last revision** 08/29/2023

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 8)

Printing date 08/29/2023

Reviewed on 08/29/2023

---

**Product Name: Permethrin**

---

(Contd. of page 7)

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*BEI: Biological Exposure Limit*

*Flammable Liquids 2: Flammable liquids – Category 2*

*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

*Sensitization - Skin 1: Skin sensitisation – Category 1*

*Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3*

---

— US —