



**Material Safety Data Sheet**

**PERMANONE® 30-30**

MSDS Number: 102000013918

MSDS Version 2.0

Revision Date: 12/08/2010

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product name** PERMANONE® 30-30  
**MSDS Number** 102000013918  
**EPA Registration No.** 432-1235

Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)  
For Product Information call: 1-800-331-2867

**SECTION 2. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Caution! Harmful if swallowed or absorbed through skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist.

**Physical State** liquid

**Odor** mild

**Appearance** amber

**Exposure routes** Skin contact, Ingestion, Inhalation, Eye contact

**Immediate Effects**

**Eye** Moderate eye irritation. Avoid contact with eyes.

**Skin** Causes skin irritation. Harmful if absorbed through skin. Avoid contact with skin and clothing.

**Ingestion** Harmful if swallowed. Do not take internally.

**Inhalation** May be harmful if inhaled. Avoid inhalation of vapour or mist.

**Chronic or Delayed Long-Term**

This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects.

**Potential Environmental Effect**

Highly toxic to bees. Extremely toxic to fish and aquatic invertebrates.



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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Permethrin	52645-53-1	30.00
Piperonyl butoxide	51-03-6	30.00

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Skin</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Notes to physician</b>	
<b>Hazards</b>	This product contains a pyrethroid.
<b>Treatment</b>	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash point</b>	129.5 °C / 265.1 °F
<b>Suitable extinguishing media</b>	Carbon dioxide (CO2), Dry chemical, Foam, Water



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**Fire Fighting Instructions**

Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

**Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice**

Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**SECTION 7. HANDLING AND STORAGE**

**Handling procedures**

Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Keep away from heat and sources of ignition.

**Storing Procedures**

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**Work/Hygienic Procedures**

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Min/Max Storage Temperatures**

Recommended minimum transport/storage temperature: 4 °C / 39 °F

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**General Protection**

Follow all label instructions. Train employees in safe use of the product.



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Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

- Eye/Face Protection**      Safety glasses with side-shields
- Hand protection**            Chemical resistant nitrile rubber gloves
- Body Protection**            Wear long-sleeved shirt and long pants and shoes plus socks.
- Respiratory protection**      When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Exposure Limits**

Permethrin	52645-53-1	OES BCS* TX ESL	TWA ST ESL	10 mg/m3 50 ug/m3
Piperonyl butoxide	51-03-6	TX ESL OES BCS*	AN ESL TWA	5 ug/m3 500 ppm

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance**                    amber
- Physical State**                liquid
- Odor**                             mild
- Density**                        ca. 0.99 g/cm<sup>3</sup> at 20 °C
- Bulk density**                 8.25 lb/gal

**SECTION 10. STABILITY AND REACTIVITY**

- Incompatibility**                Strong oxidizing agents
- Chemical Stability**            Stable under recommended storage conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the two technical-grade active ingredients, permethrin and piperonyl butoxide.



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**Acute oral toxicity** male/female combined rat: LD50: 993 mg/kg

**Acute dermal toxicity** rat: LD50: > 2,000 mg/kg

**Acute inhalation toxicity** rat: LC50: > 2.2 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.

rat: LC50: > 8.8 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.

**Skin irritation** rabbit: Moderate skin irritation.

**Eye irritation** rabbit: Mild eye irritation.

**Sensitisation** guinea pig: Non-sensitizing.

**Chronic toxicity** Permethrin caused neurobehavioral effects (e.g., tremors) and/or organ effects (liver, lung, kidney) in chronic studies in rats, mice and dogs.

Piperonyl butoxide caused decreased body weights and/or increased organ weights (liver, kidney, adrenal) in chronic studies in rats and dogs.

**Assessment Carcinogenicity**

Permethrin has low oncogenic potential in mice and no oncogenic potential in rats, therefore, EPA has concluded the likelihood of oncogenicity effects in humans from permethrin to be extremely low or nonexistent.

Piperonyl butoxide gave no evidence of a carcinogenic potential in a lifetime feeding study in rats. In an oncogenicity study in mice, piperonyl butoxide caused an increased incidence of liver tumors. The US EPA has categorized piperonyl butoxide as a group C carcinogen, possible human carcinogen, based on limited evidence of cancer in laboratory animals.

**ACGIH**

None.

**NTP**

None.

**IARC**

Permethrin

52645-53-1

Overall evaluation: 3

Piperonyl butoxide

51-03-6

Overall evaluation: 3

**OSHA**

None.

**Reproductive toxicity**

**REPRODUCTION:**

Permethrin was not a reproductive toxicant in multi-generation reproduction studies in rats.



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Piperonyl butoxide was not a reproductive toxicant in a two-generation study in rats.

**DEVELOPMENTAL TOXICITY:**

Permethrin was not a primary developmental toxicant in rats, mice and rabbits. Developmental effects (e.g., decreased fetal weights) were observed in rats and rabbits but were considered secondary to maternal toxicity.

Piperonyl butoxide did not cause developmental, embryotoxic or teratogenic effects in developmental toxicity studies in rats and rabbits.

**Assessment neurotoxicity**

Permethrin caused neurobehavioral effects (e.g., tremors) in an acute and subchronic neurotoxicity screening study in rats without any correlating neuropathological changes.

Piperonyl butoxide did not demonstrate the potential to cause neurotoxicity in standard toxicity studies submitted to the Agency. EPA has concluded that there is not a concern for neurotoxicity resulting from exposure to piperonyl butoxide.

**Mutagenicity**

Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo mutagenicity studies.

Piperonyl butoxide does not have significant potential for mutagenicity based on sufficient evidence.

**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental precautions**

Do not apply when weather conditions favor runoff or drift. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance**

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

**Container Disposal**

Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.



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**RCRA Information** Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

**SECTION 14. TRANSPORT INFORMATION**

**CFR** Not dangerous goods / not hazardous material

**IMDG**

UN-Number **3082**  
Class 9  
Packaging group III  
Marine pollutant Marine Pollutant  
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, PIPERONYL BUTOXIDE SOLUTION)

**IATA**

UN-Number **3082**  
Class 9  
Packaging group III  
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, PIPERONYL BUTOXIDE SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 432-1235

**US Federal Regulations**

**TSCA list**

Piperonyl butoxide 51-03-6

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

Permethrin	52645-53-1	1.0%
Piperonyl butoxide	51-03-6	1.0%

**US States Regulatory Reporting**

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.



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This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

Permethrin	52645-53-1	NJ
Piperonyl butoxide	51-03-6	NJ

**Canadian Regulations**

**Canadian Domestic Substance List**

Piperonyl butoxide	51-03-6
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**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**

Permethrin	52645-53-1
Piperonyl butoxide	51-03-6

**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Reactivity - 0      Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Updated due to new system and numbering scheme. Updated for general editorial purposes.

Revision Date: 12/08/2010

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