

# Material Safety Data Sheet



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## Permanone® 25 Dust Concentrate

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This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Permanone® 25 Dust Concentrate  
**EPA REGISTRATION NUMBER:** 73049-352  
**MSDS IDENTIFICATION CODE/NO.:** ENV-0124  
**CHEMICAL NAME:** Mixture; a.i.'s, permethrin  
**PRODUCT DESCRIPTION:** This product is intended for manufacture or formulation into insecticides. Only for formulation into an insecticide for the following uses: Domestic indoor/outdoor, greenhouse ornamentals, commercial industrial uses. Home garden terrestrial food and non-food, indoor non-food and treatment of animals (livestock and pets).

Permanone is a registered trademark of Bayer AG.

**MANUFACTURER**  
Valent BioSciences Corporation  
870 Technology Way  
Libertyville, Illinois 60048

**EMERGENCY TELEPHONE NUMBERS**  
HEALTH EMERGENCY OR SPILL (24 hr):  
Within the United States (877) 315-9819  
Outside the United States (651) 632-6184

**PRODUCT INFORMATION**  
ENVIRONMENTAL SCIENCE PRODUCTS:  
(866) 822-3731  
[www.valentbiosciences.com](http://www.valentbiosciences.com)

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**MSDS NO.** ENV-0124

**Revision Number:** 1

**Revision Date:** 03/11/2005

## SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name (CAS #) [Chemical Name]	Weight Percent	Exposure Limit	Ref.
<b>Permethrin (52645-53-1) *</b> (3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate]  Synthetic Pyrethroid	= 25.0	None established	
<b>Inert Ingredients Containing: **</b>	= 75.0		
<b>Amorphous Silica (61790-53-2)</b>  May contain up to 7% crystalline silica Cristobalite (14464-46-1 < 3% Quartz (14808-60-7 < 4%	> 65	0.05 mg/m3 Respirable Cristobalite  0.1 mg/m3 Respirable Quartz	OSHA

\* Active Ingredient

\*\* Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identity is withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling (877) 315-9819 (within the United States) or (651) 632-6184 (outside the United States) at any time.

## SECTION 3: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**WHITE/OFF-WHITE SOLID, DUST WITH A FAINT PETROLEUM DISTILLATE ODOR**

**WARNING:**

- CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY
- TOXIC TO FISH AND AQUATIC INVERTEBRATES

### POTENTIAL HEALTH EFFECTS

**Acute Toxicity (Primary Routes of Exposure):** Inhalation, ingestion, eye and skin contact

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**Signs and Symptoms of Systemic Effects:** Symptoms of overexposure include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity. Contact with this product has rarely produced skin sensations such as numbing, burning and tingling, these skin sensations are reversible and usually subside within 12 hours.

**Eye:** Causes substantial but temporary eye injury.

**Skin:** Slightly irritating.

**Ingestion:** May cause irritation if ingested.

**Inhalation:** Irritation to nose and throat

**Contains: Crystalline Silica**

**DELAYED/LONG TERM EFFECTS**

**Chronic Toxicity (Including Cancer):**

Prolonged breathing of excessive dust may affect lung function. This product contains small amounts of crystalline silica. Inhalable crystalline silica from occupational sources is considered a human carcinogen.

Silica: Product contains greater than 0.1% total crystalline silica.

Inhalable crystalline silica fraction unknown. The International Agency for Research on Cancer (IARC) believes there is sufficient evidence that crystalline silica is carcinogenic to humans if it is inhaled in the form of quartz or cristobalite from occupational sources. IARC notes that carcinogenicity was not detected in all industrial circumstances studied and that the carcinogenicity of crystalline silica may be dependent on inherent characteristics of the silica, or an external factors affecting its biological activity or on the distribution of its polymorphs (quartz, cristobalite).

Naturally occurring minerals invariably contain trace quantities of materials cited in the California Safe Drinking and Toxic Enforcement Act. In addition to crystalline silica, trace quantities of lead and arsenic may be detected. Test results for these products show that lead and arsenic, if present, are at concentrations of less than 5 PPM each.

CARCINOGENICITY: NTP: yes IARC: yes Group 1 OSHA: yes

## SECTION 4: FIRST AID MEASURES

### EMERGENCY NUMBER

Within the United States (877) 315-9819

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Have the product container or label with you when calling poison control center or doctor, or going for treatment.

**EYES:** 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 poison control center or doctor for treatment advice.

**SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**INHALATION:** Move person 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 poison control center or doctor for further treatment advice.

**HINTS FOR THE PHYSICIAN:** This product contains a Pyrethroid. If a small amount is ingested (or if treatment is delayed) oral administration of large amounts of activated charcoal and a cathartic is probably sufficient therapy.

Do not administer milk, cream or other substances containing vegetable or animal fats, which enhance the absorption of lipophilic substances.

## SECTION 5: FIRE FIGHTING MEASURES

**FLASH POINT:** NA°F (NA°C)   **METHOD:** TCC

**AUTOIGNITION:** NA

**EXTINGUISHING MEDIA:** Carbon Dioxide, Dry Chemical, Foam, or Water

**FLAMMABLE LIMITS** (% by volume in air):    Lower: NA                   Upper: NA

**FIRE AND EXPLOSION HAZARDS:** Do not use or store near heat or open flame.

**FIRE FIGHTING INSTRUCTIONS:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

**HAZARDOUS COMBUSTION PRODUCTS:** May form toxic materials: Carbon dioxide and carbon monoxide, various hydrocarbons, etc.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

If it is safe to do so:

- Evacuate non-essential personnel from the area to prevent human exposure.
- Ventilate area.
- Avoid creation of dust.
- Stop the source of the spill. Contain the spill to prevent further contamination of the soil, surface water, or ground water.
- Remove all sources of ignition.

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Where possible drum should be oriented to prevent further leakage. Drum should be placed in a spillage drum for further movement or transport. Avoid creation of dust.

**GENERAL AND DISPOSAL:** Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the adverse effect of the spill. Ensure that the disposal is in compliance with all Federal, Provincial, and local regulations (See Section 13 for applicable RCRA Number). Refer to Section 15 for applicable Reportable Quantity (RQ) and other regulatory requirements.

### SPILL OR LEAK

#### CONTAINMENT:

**Small Spills:** Absorb with an inert absorbent material such as granular clay, sawdust, or pet litter. Sweep up carefully while avoiding the formation of dust cloud. Place in an approved chemical waste container for disposal. Do not allow spill material to enter any body of water.

**Large Spills:** Eliminate all ignition sources. Stop leak if you can do so without coming into contact with spilled material. Dike far ahead of liquid spill for later disposal. All equipment used to clean up spill should be grounded. Prevent entry into waterways, sewers, basements or confined areas. Inform appropriate authorities immediately if contamination occurs.

#### CLEANUP:

**CLEANUP:** Sweep (or vacuum) up and dispose of with chemical waste. Avoid creation of dust. Place in an approved chemical waste container for disposal. Rinse spill area with a small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place in the same chemical waste container. Area can be washed with water to remove the last trace residue. Do not allow water to contaminate water supplies or sewers.

## SECTION 7: HANDLING AND STORAGE

#### HANDLING PRECAUTIONS:

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Avoid breathing dust.

#### STORAGE PRECAUTIONS:

Store product in original container in a cool, dry area away from children. Do not contaminate water, food or feed by storage or disposal.

**WORK/HYGIENIC PRACTICES:** Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Control airborne concentrations below the appropriate exposure guidelines. Use local exhaust ventilation.

**RESPIRATION/VENTILATION:** Use a MSHA/NIOSH approved dust mask. Long term overexposure to high concentration of this dust without the use of a dust mask may product X-

Ray evidence of dust in the lungs. Continued long term overexposure may affect respiratory function in some individuals.

**EYE PROTECTION:** Safety glasses or goggles.

**SKIN PROTECTION:** Use of butyl or nitrile rubber gloves.

**BODY PROTECTION:** Clothing (disposable or washable) to minimize skin contact.

**OTHER/GENERAL PROTECTION:** Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. Eye wash facility and safety shower should be available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	White/off-white
<b>ODOR:</b>	Faint petroleum distillate
<b>PHYSICAL STATE:</b>	Solid/Dust
<b>SOLUBILITY (H<sub>2</sub>O):</b>	NA
<b>pH:</b>	NA
<b>DENSITY/SPECIFIC GRAVITY</b>	20 – 25 lb/ft <sup>3</sup>
<b>VISCOSITY</b>	NA

## SECTION 10: STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Stable

**CONDITIONS TO AVOID:** Excessive heat and sources of ignition.

**INCOMPATIBILITY:** Strong oxidizing agents and acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May form toxic materials: Carbon dioxide and carbon monoxide, various hydrocarbons, etc.

**OXIDATION/REDUCTION PROPERTIES:** Product does not have the potential to act as a strong oxidizing or reducing agent.

**HAZARDOUS POLYMERIZATION:** Will not occur

## SECTION 11: TOXICOLOGICAL INFORMATION

**ACUTE** (Product Specific Information): No acute toxicity data is available for this formulation. Acute toxicity has been completed on a similar formulation, Permethrin 25 WP.

<b>Oral Toxicity LD<sub>50</sub> (rat):</b>	> 1,100 mg/kg	III EPA Tox Category
<b>Dermal Toxicity LD<sub>50</sub> (rabbit):</b>	> 2,000 mg/kg	III EPA Tox Category
<b>Inhalation Toxicity LC<sub>50</sub>(rat):</b>	> 5.27 mg/L	IV EPA Tox Category
<b>Eye Irritation (rabbit):</b>	Moderately irritating	III EPA Tox Category
<b>Skin Irritation (rabbit):</b>	Moderately irritating	III EPA Tox Category
<b>Skin Sensitization (guinea pig):</b>	Sensitizer	

Note: For transport purposes (49 CFR 173.132), the calculated 1-hour LC<sub>50</sub> (Rate) is 5.27 mg/L.

TOXICITY OF ACTIVE INGREDIENTS: **PERMETHRIN:**

**CHRONIC/CARCINOGENICITY:** A statistically significant increase in the incidence of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/kg/day of permethrin technical over 85 weeks.

**TERATOGENICITY:** Permethrin was not teratogenic when tested in rats.

**MUTAGENICITY:** Permethrin did not produce any mutagenic effects when tested in the Ames test.

**CARCINOGENICITY:** NTP: No IARC: No OSHA: No

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

**ACUTE AND LONG-TERM TOXICITY TO FISH AND INVERTEBRATES:**

This product is highly toxic to fish.

**OTHER ENVIRONMENTAL INFORMATION:**

Do not discharge effluent containing this product into lakes streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water board or Regional Office of the EPA. Do not contaminate water when disposing of equipment wash waters.

## SECTION 13: DISPOSAL CONSIDERATIONS

**PRODUCT DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

**CONTAINER DISPOSAL:**

**FIBER DRUMS WITH LINERS:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary land-fill or by incineration if allowed by State and local authorities. Dispose of drum in the same manner.

**FIBER DRUMS WITHOUT LINERS:** Completely empty drum by shaking and tapping sides to loosen clinging particles. Empty residue into application equipment. Then dispose of drum in a sanitary landfill, or by incineration if allowed by State and local authorities.

### RCRA INFORMATION

**RCRA HAZARDOUS WASTE INGREDIENTS:** None

## SECTION 14: TRANSPORT INFORMATION

This product is regulated for water shipment ONLY. For shipments other than by water, describe using only the "freight Description" below.

**DOT PROPER SHIPPING NAME:** Environmentally hazardous substance, solid, n.o.s. (permethrin)

**RQ:** Not listed

**DOT HAZARD CLASS:** 9

**UN/NA NUMBER:** 3077

**PACKAGING GROUP:** III

**REMARKS:** ERG Guide 31

**EXEMPTION REQUIREMENT:** NA

**NOTE: MARPOL Designation:** Severe Marine Pollutant (permethrin)

**Freight Description:** Insecticide, NOI, other than Poison

## SECTION 15: REGULATORY INFORMATION

**REGULATIONS UNDER FIFRA:** All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

**EPA Registration Number:** 73049-352

### OTHER U.S. FEDERAL REGULATIONS:

**TSCA Inventory:** Registered Pesticide, exempt from TSCA.

### SARA TITLE III:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

CAS NUMBER	INGREDIENT NAME	PERCENT BY WEIGHT
52645-53-1	Permethrin	= 25

### SARA Title III:

Acute Health Hazard - Yes  
Chronic Health Hazard - Yes  
Fire Hazard - No  
Sudden Release of Pressure - No  
Reactivity Hazard - No

This information must be included on all MSDSs that are copied and distributed for this material.

### REGULATED INGREDIENTS

INGREDIENT: Permethrin

CAS NUMBER: 52645-53-1

PERCENT BY WEIGHT: = 25

Regulations: State right-to-know: NJ, MA

SARA Section 313 Toxic Chemical

European Inventory of Existing Commercial Substances (EINECS)

INGREDIENT: Amorphous Silica

CAS NUMBER: 61790-53-2

PERCENT BY WEIGHT: < 65

Regulations: California Proposition 65. This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**STATE REGULATIONS:** Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities

**HMIS HAZARD RATING** - HEALTH: 3 High  
- FIRE: 1 Slight  
- REACTIVITY: 0 Negligible  
- PROTECTION: C

**NFPA HAZARD RATING** - HEALTH: 3 High  
- FIRE: 1 Slight  
- REACTIVITY: 0 Negligible  
- SPECIAL: -

**RATINGS:**

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4).

These values are obtained using professional judgment. Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with the information contained in the product MSDS.

\* RQ: Reportable Quantity

\*\* RCRA waste codes must be determined on a case-by-case basis (i.e., spill, processing waste, etc.).

For information regarding potential adverse health effects from exposure to this product, refer to Sections 3 and 11.

## SECTION 16: OTHER INFORMATION

**REASON FOR ISSUE:** New company name and new EPA number  
**REVISION NUMBER:** 1  
**REVISION DATE:** 03/11/2005  
**SUPERSEDES DATE:** 12/15/2000  
**EPA REGISTRY NUMBER:** 73049-352  
**MSDS NUMBER:** ENV-0124

### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions.

THE INFORMATION IN THIS MSDS IS BASED ON DATA AVAILABLE TO US AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT VALENT BIOSCIENCES CORPORATION TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS.

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