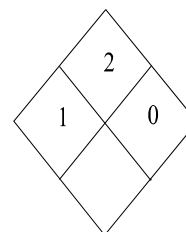


## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



**PRODUCT NAME:** PRELUDE® TERMITICIDE; PRELUDE 240®

**GENERAL USE:** Pyrethroid type pesticide

**PRODUCT DESCRIPTION:** Clear straw-colored liquid with an aromatic odor

**EPA Registration Number:** 5481-550

**Health Canada Reg. No.:** 26509

**MSDS No.:** 364\_2

**Current Revision Date:** 24 June, 2007

**MANUFACTURER:**

AMVAC CHEMICAL CORPORATION

4100 E. Washington Blvd.

Los Angeles, CA 90023-4406

Ph: 323-264-3910

FAX: 323-268-1028

**EMERGENCY TELEPHONE NUMBERS:**

**MANUFACTURER:** 323-264-3910

**TRANSPORTATION (24 HOURS)**

**CHEMTREC:** 800-424-9300

**OTHER (24 HOURS)**

**AMVAC:** 323-264-3910

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt%</u>	<u>Hazard(s)</u>	<u>PEL/TLV</u>
Permethrin or (3-Phenoxypheny) methyl(+/-)cis/trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	52645-53-1	25.6	Eye irritant	None
Inert Ingredients		74.4		
Includes paraffinic solvents			Skin irritant	100 ppm (mfr)

Note: Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.

PRELUDE® and PRELUDE 240® are registered trademarks of AMVAC Chemical Corporation

3. **HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW:**

**CAUTION! Harmful if swallowed, inhaled or absorbed through the skin. May cause eye irritation. May cause skin irritation. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or spray mist. Use with adequate ventilation. Do not contaminate feed or foodstuffs.**

**KEEP OUT OF REACH OF CHILDREN.**

**Highly toxic to fish and aquatic organisms.**

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**POTENTIAL HEALTH EFFECTS**

**ROUTE(S) OF ENTRY:** Ingestion, inhalation, eye contact, and skin contact.

**SIGNS OF ACUTE OVEREXPOSURE:** A person suffering from acute exposure to Permethrin may suffer from mild eye irritation. In addition, exposure to Permethrin may induce adverse effects on the nervous system. Exposure to the vapors can cause irritation to eyes, lungs, and mucous membranes. Contact with liquid can cause eye irritation, skin irritation such as itching, tingling, burning or numbness, and skin defatting. Ingestion may result in vomiting. Aspiration (breathing) of the vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis (pneumonia). Prolonged exposure to aromatic hydrocarbons may result in congestive effects to a wide variety of internal organs. Symptoms of overexposure include tremors, convulsions, unsteady gait, hypersensitivity, salivation and nasal discharge. Other possible signs of overexposure include facial erythema (flushing) and facial skin tingling.

**SIGNS OF CHRONIC OVEREXPOSURE:** Same as acute.

**OTHER POTENTIAL HEALTH EFFECTS:** No evidence of mutagenic or teratogenic potential has been observed. EPA (2004) has evaluated the carcinogenic potential of Permethrin under its 'Review Draft of the Guidelines for Carcinogen Risk Assessment (1999)'. Permethrin has suggestive evidence of carcinogenicity but not sufficient to assess human carcinogenic potential. IARC has classified Permethrin as a Group 3 (sufficient animal evidence) carcinogen.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Dermatitis, asthma-like conditions, other CNS related diseases.

**CARE SHOULD BE EXERCISED IN HANDLING THIS FORMULATION.**

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#### **4. FIRST AID MEASURES**

**EYES:** Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

**INHALATION:** Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Contact a physician immediately.

**INGESTION:** DO NOT induce vomiting. If subject is conscious, administer an 8 oz. glass of water containing 2 tbsp. activated charcoal. Never give anything by mouth to an unconscious person. Contact a physician immediately.

**SKIN:** Remove contaminated clothing. Wash thoroughly with soap and clean water. If a rash or any of the symptoms of acute exposure appear, contact a physician immediately.

**NOTE TO PHYSICIANS:** This product contains a petroleum distillate solvent. Aspiration of the vomitus may cause aspiration pneumonitis. In addition, the product is a transient eye irritant and may cause paresthesia effects upon skin contact (itching, tingling, burning or numbness), with symptoms lasting up to 24 hours. Treat symptomatically. Contact your local poison control center for more medical information.

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#### **5. FIRE FIGHTING MEASURES**

##### **FLAMMABLE PROPERTIES**

Flash Point: >212°F/100°C (Setaflash CC)

Autoignition Temperature: Not available

Flammable Limits:

Lower flammable limit: 1.1% (based on solvent)

Upper flammable limit: 7.0% (based on solvent)

##### **EXPLOSIVITY**

Mechanical Impact: Not expected to be explosive under mechanical impact conditions.

Static Discharge: May accumulate static electricity.

**HAZARDOUS COMBUSTION PRODUCTS:** Combustible liquid. This product may emit irritating and toxic gasses when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS.

**EXTINGUISHING MEDIA:** Dry chemical, foam or carbon dioxide.

**5. FIRE FIGHTING MEASURES, cont'd**

**FIRE FIGHTING INSTRUCTIONS:** Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Prevent water runoff to sewers and other bodies of water.

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**6. ACCIDENTAL RELEASE MEASURES**

**GENERAL:** Thoroughly ventilate area. Wear appropriate personal protection equipment (PPE, See section 8). Keep unauthorized personnel out of the area.

**SMALL SPILL:** Dike area to prevent contamination of water bodies. Absorb liquid on solid nonflammable support (Diatomaceous earth, Kitty Litter, Clean Dri, etc.). Place in covered containers. Clean area with soap and water. The cleaning solutions are also hazardous wastes.

**LARGE SPILL:** Dike the spill area to prevent contamination of water bodies. Siphon as much liquid as possible into drums for reuse or disposal, using explosion proof equipment. Absorb remaining liquid on a solid absorbent. Place absorbed material into a sealable container and seal. Clean the spill area with soap and water. The cleaning solutions are also hazardous wastes.

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**7. HANDLING AND STORAGE**

**HANDLING:** Keep this product cool and dry. Keep container closed. Store away from feed, food, and drink. Keep away from children and pets. Wash thoroughly with soap and water after handling this product.

**STORAGE:** Store product in its original container in a cool, dry, locked place out of the reach of children. Store away from sources of heat and ignition.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Ventilation should be sufficient to keep the exposure below applicable TLV's.

**RESPIRATORY PROTECTION:** A properly FIT-TESTED NIOSH/MSHA approved respirator fitted with organic vapor cartridges is required if exposures will be at or above the TLV for this product.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION, cont'd

**SKIN PROTECTION:** Applicators and other handlers must wear long-sleeved shirt and long pants or coveralls, waterproof gloves, and shoes plus socks. Cleanup of a large spill will probably require the use of chemically impervious clothing such as PVC clothing. Follow manufacturer's instructions for cleaning/ maintaining personal protection equipment (PPE). If no such instructions are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

**EYE PROTECTION:** Safety glasses with side shields should be used whenever hazardous chemicals are being handled. Goggles or full face shield should be used if there is a potential for splashing.

**OTHER PROTECTION:** An eyewash station and a safety shower should be located in the work area.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Clear straw-colored liquid
<b>Odor:</b>	Paraffinic solvent odor
<b>Odor Threshold:</b>	None established
<b>Boiling Point:</b>	> 176°F/80°C
<b>Freezing/Melting Point:</b>	< 0°C/32°F
<b>Specific gravity:</b>	0.96 g/mL @ 20°C
<b>Density:</b>	8.0 lb/gal
<b>Vapor Pressure (mm/Hg):</b>	<1mm Hg @ 68°F (Permethrin)
<b>Vapor Density:</b>	Heavier than air
<b>Percent Volatile by Vol:</b>	No data
<b>Solubility in Water:</b>	Emulsifiable
<b>Solubility (Other):</b>	This product is soluble in aromatic solvents
<b>Partition Coefficient (O/W):</b>	Not determined for formulation
<b>pH:</b>	6 (1% dispersion in water)
<b>Evaporation Rate:</b>	0.1 as compared to –Butyl acetate

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## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY (Conditions to avoid):** This product is stable under normal storage and use conditions.

**INCOMPATIBILITY:** Avoid heat, flame, and strong oxidizing materials.

10. **STABILITY AND REACTIVITY, cont'd**

**HAZARDOUS DECOMPOSITION PRODUCTS:** This product may emit hazardous fumes of hydrogen chloride, hydrogen fluoride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS when these conditions are present.

**HAZARDOUS POLYMERIZATION:** This product will not polymerize.

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11. **TOXICOLOGICAL INFORMATION**

<b>INGESTION:</b>	Oral LD <sub>50</sub> (rat):	3268 mg/kg
<b>DERMAL:</b>	Skin LD <sub>50</sub> (rabbit):	> 2000 mg/kg
<b>INHALATION:</b>	Inhalation LC <sub>50</sub> (rat):	2.05 mg/l (4 hour)
<b>SENSITIZATION:</b>	Skin sensitization:	Not a sensitizer in animal tests
<b>IRRITATION:</b>	Eye irritation (rabbit):	Mildly irritating
	Skin irritation: (rabbit)	Mildly irritating

**TERATOGENICITY:** No evidence of teratogenicity has been observed in laboratory testing of Permethrin Technical.

**MUTAGENICITY:** No evidence of mutagenicity has been observed in testing of Permethrin Technical.

**CARCINOGENICITY:** No carcinogenic effects have been observed in animals. EPA (2004) has evaluated the carcinogenic potential of Permethrin under its 'Review Draft of the Guidelines for Carcinogen Risk Assessment (1999)'. Permethrin has suggestive evidence of carcinogenicity but not sufficient to assess human carcinogenic potential.

**REPRODUCTIVE TOXICITY:** No evidence of reproductive toxicity has been observed during animal testing of Permethrin Technical.

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** No data are available.

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12. **ECOLOGICAL INFORMATION**

**General:** Permethrin is highly toxic to fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply directly adjacent to potable water supplies.

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**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

**CONTAINER DISPOSAL:** Triple rinse(or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

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**14. TRANSPORTATION INFORMATION**

<b>DOT CLASS:</b>	9
<b>UN NUMBER:</b>	UN3082
<b>IMDG CLASS:</b>	9
<b>IATA CLASS (air):</b>	Not regulated
<b>MARINE POLLUTANT:</b>	Yes
<b>PACKING GROUP:</b>	III
<b>HAZARD LABEL(s):</b>	9
<b>ADR CLASS (road):</b>	Not listed in ADR
<b>PROPER SHIPPING NAME(s):</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (Permethrin)
<b>REPORTABLE QUANTITY:</b>	No
<b>US SURFACE FREIGHT CLASS:</b>	Insecticides, NOI, Poison other than Class A Poison

**PACKAGING**

**GENERAL DESCRIPTION:** 1 gallon bottle; 250 gallon tote

**NOTE 1:** This product is not regulated when shipped by highway, rail, or air in non-bulk packaging (maximum capacity of 450 L (119 gallons) or less. When shipped by vessel or in bulk packaging, this product is regulated according to the data shown.

**NOTE 2:** The classification of this product is based on the fact that the mist criteria found in 49CFR§173.132(b)(3) will not be met and therefore the LC50 is not applicable.

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**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS:** This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

**15. REGULATORY INFORMATION, cont'd**

**CANADIAN REGULATIONS:** This product is registered under the Pest Control Product Act of Canada. It is a violation of Canadian Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions.  
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**SARA TITLE III DATA**

**Section 311 & 312 Hazard Categories:**

Immediate Health Hazard:	Yes
Delayed Health Hazard:	Yes
Fire Hazard:	Yes
Reactive Hazard:	No
Sudden Pressure Release Hazard:	No

**Section 302 Extremely Hazardous Substances:** None

**Section 313 Toxic Chemicals:**

Permethrin (52645-53-1)	25%
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**CERCLA Reportable Quantities (RQ):** None

**STATE REGULATIONS:**

**CALIFORNIA (Proposition 65):** None

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**16. OTHER INFORMATION**

**MSDS Status:**

**Date This Revision:** 25 June, 2007

**Date Previous Revision:** 21 June, 2007

**Person Responsible for Preparation:** Gary A. Braden

**Reasons for Revision:** Regulatory information for this product in Canada was inadvertently left off the original MSDS.

**DISCLAIMER:** This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.



**16. OTHER INFORMATION, cont'd**

**ABBREVIATIONS:**

ACGIH	-	American Conference of Governmental Industrial Hygienists
BEI	-	Biological Exposure Index
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Agency
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act

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This is the last page of this MSDS. There should be 9 pages.