

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:

Arysta LifeScience NA Corp.
15401 Weston Pkwy, Suite 150
Cary, NC 27513

EMERGENCY TELEPHONE NUMBERS:

FOR 24 HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
1-866-303-6952

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure,
or accident call CHEMTREC 1-800-424-9300

PRODUCT NAME : PERMETHRIN 3.2 AG
CHEMICAL NAME : (3-phenoxyphenyl)methyl cis-trans-3-(2,2-dichloro
ethenyl)-2,2-dimethylcyclopropanecarboxylate
CHEMICAL FAMILY : Pyrethroid insecticide
PRODUCT CODE : EPA Reg. No. 66330-337

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	PEL/TLV
Permethrin	38.4	52645-53-1	None
Aromatic Hydrocarbons	<32.2	64742-95-6	100 ppm
1,2,4-trimethyl benzene	<16.4	95-63-6	25 ppm
Xylene	<10.2	1330-20-7	100 ppm
Ethylbenzene	<2.0	100-41-1	100 ppm
Cumene	<1.0	98-82-8	50 ppm (skin)
1-butanol	<1.0	71-36-3	50 ppm (skin)

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

EMERGENCY OVERVIEW: Amber liquid with aromatic solvent odor.

- Thermal decomposition and burning may form toxic by-products.
- For large exposures or fire, wear personal protective equipment.
- Moderately irritating to the skin and eyes.

POTENTIAL HEALTH HAZARDS:

EYE - Moderately irritating to the eyes. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN - Prolonged or repeated skin contact may cause irritation and sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

INHALATION - Vapor or spray mists may be harmful if inhaled.

INGESTATION - Harmful if swallowed.

POTENTIAL PHYSICAL HAZARDS: - Moderately combustible. May support combustion if heated above the product's flash point (See Section 5).

ENVIRONMENTAL HAZARDS: - Highly toxic to fish and aquatic organisms. Keep out of drains and watercourses.

SECTION 4 - FIRST AID MEASURES

IF IN 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.

IF ON 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.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an

unconscious person. Do not give anything by mouth to an unconscious person.

IF INHALED: Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Contains petroleum distillates - vomiting may cause aspiration pneumonia.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT (method): 108 °F (42 °C) (Closed Cup)

EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Contain all runoff.

FIRE AND EXPLOSION HAZARD: Moderately combustible liquid. Can form explosive mixtures at temperatures at or above the flash point. Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems is preferred to prevent environmental damage from excessive water run off.

FIRE FIGHTING EQUIPMENT: Self-contained breathing apparatus with full facepiece. Full fire fighting turnout gear (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS: Chlorine, Hydrogen chloride, and Oxides of hydrogen and carbon.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Protective Equipment section. Isolate hazard area. Keep unnecessary personnel from entering.

SMALL SPILL: Absorb small spills on sand, vermiculite or other non-combustible inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, scrub the area with detergent and water and neutralize with dilute alkaline solutions of soda ash, or lime. Pick up wash liquid with additional absorbent and place in a disposable container. This material is a water pollutant and should be prevented from drainage systems and bodies of water.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Do not reuse this container.

STORAGE: Keep container closed when not in use. Store in original containers only. Keep away from food, feed and drinking water. Store in a cool, dry, well ventilated place away from heat and other sources of ignition. Keep from freezing. If product crystallizes, store at 70 to 85 F for 24 hours and agitate to redissolve crystals. Do not use direct heat to warm.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - For splash, mist or spray exposure, wear chemical protective goggles or face shield.

CLOTHING - Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit such as a PVC suit. Leather items such as shoes, belts and watchbands - that become contaminated should be removed and destroyed.

GLOVES - Chemical-resistant gloves such as nitrile, neoprene or Viton brand. Wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

RESPIRATOR - All pesticide handlers must wear a respiratory protection device when working in a non-ventilated space. Use a properly fitted half-face or full-face air-purifying respirator, which is approved for pesticides by NIOSH or MSHA. Respirator use and selection must be based on airborne concentrations.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
2. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Amber liquid.

ODOR: Aromatic solvent.

MOLECULAR WEIGHT (technical): 391.3

MOLECULAR FORMULA (technical): $C_{21}H_{20}Cl_2O_3$

BOILING POINT: Unknown

FREEZING POINT: Unknown

SPECIFIC GRAVITY: 1.002 at 20 °C (water = 1)

pH: 5.0 - 5.6 (1% emulsion)

VAPOR DENSITY: (Air = 1) > 1

% VOLATILE: > 50%

WATER SOLUBILITY: Emulsifiable.

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable, however may decompose if heated.

CONDITIONS TO AVOID: Excessive heat and fire.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	-	1,030 mg/Kg
Dermal LD ₅₀ (rabbit)	-	> 2,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 25.7 mg/L

ACUTE EFFECTS FROM OVEREXPOSURE: This product has low oral, dermal and inhalation toxicity. It is moderately irritating to the skin and eyes. Experience to date indicates that contact with this product has rarely produced skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Large, toxic doses administered to laboratory animals have produced symptoms such as diarrhea, salivation, tremors and intermittent convulsions. Overexposure to animals via inhalation has also produced hyperactivity and hypersensitivity. Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the formulation. In studies with laboratory animals, permethrin did not cause reproductive toxicity or teratogenicity. Analysis of chronic feeding studies in both mice and rats with permethrin resulted in the conclusion that permethrin's potential for induction of oncogenicity in experimental animals is low and that the likelihood of oncogenic effects in humans is nonexistent or extremely low. Long term feeding studies in animals resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system and histopathological changes in the lungs and liver. An overall absence of genotoxicity has been demonstrated in mutagenicity testing with permethrin. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage. Inhalation of xylene vapors at high doses has also resulted in an increased incidence of malformations and decreases in fetal weight in laboratory animals. Damage from xylene may be potentiated by alcohol.

CARCINOGEN STATUS:

OSHA -	Not listed.
NTP -	Not listed.
IARC -	Not listed.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is extremely toxic to fish and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Pesticide wastes are toxic. Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations.

CONTAINER: Non-returnable containers which held this material should be cleaned prior to disposal by triple rinsing. Containers which held this material may be

triple-rinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: This product is not regulated by the DOT in non-bulk packaging.

SECTION 15 - REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated.

CERCLA REPORTABLE QUANTITY:	Xylene	<10%	RQ 1000 lbs
	Ethylbenzene	<2%	RQ 1000 lbs
	Cumene	<1%	RQ 5000 lbs
	1-butanol	<1%	RQ 5000 lbs

SARA TITLE III STATUS:

302 Extremely Hazardous Substance	- Not listed
311 Hazard Categories	- Immediate, Delayed, Fire
312 Threshold Planning Quantity	- 10,000 lbs (as a mixture)
313 Toxic Chemicals	- 1,2,4 Trimethylbenzene (95-63-6) Permethrin (52645-53-1)

CALIFORNIA PROP 65 STATUS: Not listed.

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Arysta LifeScience North America (ALSNA) Corporation's knowledge. ALSNA makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. To the extent permitted by law, we disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

REVISED DATE: October 17, 2008
REVISED FOR: Company Information and Emergency Telephone Numbers
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