

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Shur-Kill Multi-Purpose Aerosol insecticide	Product Code:	EPA Reg. #5602-209-72159
Manufacturers Name:	Agrisel USA, Inc.	Chemical Family:	Aerosol Pesticide
Street Address:	715 Bittersweet Trail	Emergency Phone No:	INFOTRAC 800-535-5053
City, State, Zip:	Atlanta, GA 30350	Revision Date:	3/15/2004

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name (CAS #) [Chemical Name]	Weight Percent	Exposure Limit	Ref.
Piperonyl butoxide (51-03-6) * 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole	= 0.50	None established	
Tetramethrin (7696-12-0) * (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isindol-2-yl)methyl 2,2-dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylate] Synthetic Pyrethroid	= 0.10	None established	
Permethrin (52645-53-1) * (3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate] Synthetic Pyrethroid	= 0.25	None established	
Inert Ingredients Containing: **	= 99.15		
Aliphatic Petroleum Distillates (64742-47-8)	< 99	None established	
Carbon Dioxide (124-38-9)	< 5.0	5,000 ppm 30,000 ppm	ACGIH TLV-TWA ACGIH TLV-STEL
		5,000 ppm	OSHA PEL-TWA

* 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.

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

AEROSOL

CAUTION: - HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN
 - EYE IRRITANT

- TOXIC TO FISH
- UNDER PRESSURE
- FLAMMABLE

POTENTIAL HEALTH EFFECTS

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

Signs and Symptoms of Systemic Effects: May cause gastrointestinal effects such as nausea, vomiting and diarrhea. Based on animal studies, symptoms of overexposure to this product include diarrhea, yellow nasal discharge and activity decrease. Ingestion or inhalation of large quantities can cause respiratory tract and eye irritation as well as nervous system effects such as dizziness, loss of coordination, tremors and loss of consciousness.

Eye: Moderately irritating.

Skin: Moderately irritating. Prolonged or repeated contact may result in allergic reactions contact dermatitis which is characterized by dryness, chapping and reddening.

Ingestion: Harmful if swallowed. Not an expected route of exposure for an aerosol product. Ingestions of small quantities are usually nonfatal unless aspiration occurs. If aspiration occurs during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death

Inhalation: Harmful if inhaled.

SECTION 4 – FIRST AID MEASURES

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.

NOTES TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

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: 192°F (89°C)

METHOD: TCC

FLAME EXTENTION: Negative

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: Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

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

OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Remove all sources of ignition.

Ventilate area. Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water.

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:

If can is punctured or leaking soak up liquid with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Place in an approved chemical waste container for disposal. Do not allow spill material to enter any body of water.

CLEANUP:

Rinse spill area with small amount of soapy water. Contain and absorb the spill with inert absorbents and place into the same disposal 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 moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals. Avoid contamination of feed and foodstuff.

Remove pets and birds and cover fish aquaria before spraying. Prevent re-entry of dogs and cats into treated area until spray deposits are dry. Toxic to fish, do not apply directly to water.

Contents under pressure. Keep away from heat, sparks, and open flame. Do not puncture or incinerate container.

STORAGE PRECAUTIONS: Do not contaminate water, food or feed by storage or disposal. Store product in original container in a cool, dry area away from children and pets. Do not store near heat or open flame. Exposure to temperatures above 130°F may cause bursting.

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

EYE PROTECTION: Not required with normal use, unless label directs otherwise.

RESPIRATION/VENTILATION: Use in a well ventilated area. Vacate premise during use and ventilate before reoccupying.

SKIN PROTECTION: Not required with normal use, unless label directs otherwise.

OTHER/GENERAL PROTECTION: Avoid contamination of feed and foodstuffs. Wash all food processing surfaces after treatment. Do not use in facility when in operation. Remove pets, birds and cover fish aquariums before spraying.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid-aerosol
ODOR:	Odorless to faint deodorized kerosene odor.
PHYSICAL STATE:	Liquid (prefill)
SOLUBILITY (H₂O):	NA
pH:	NA
DENSITY/SPECIFIC GRAVITY	6.50 lb/gal @ 25°C (prefill)
VISCOSITY	20.3 cps @ 22°C (prefill)

SECTION 10 – REACTIVITY

CHEMICAL STABILITY:	Stable
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 EPA Reg. No. 73049-163, containing 0.20% Tetramethrin, 0.50% Permethrin and 1.0% Piperonyl Butoxide.

Oral Toxicity LD50 (rat):	>5,000 mg/kg	IV EPA Tox Category
Dermal Toxicity LD50 (rabbit):	> 5,000 mg/kg	IV EPA Tox Category
Inhalation Toxicity LC50(rat):	> 4.73 mg/l	IV EPA Tox Category
Eye Irritation (rabbit):	Mild irritant	III EPA Tox Category
Skin Irritation (rabbit):	Slight irritant	IV EPA Tox Category
Skin Sensitization (guinea pig):	Sensitizer	

TOXICITY OF ACTIVE INGREDIENTS:

TETRAMETHRIN, PERMETHRIN AND PIPERONYL BUTOXIDE:

CHRONIC/CARCINOGENICITY:

A statistically significant increase in the number of benign liver tumors appeared in mice fed piperonyl butoxide technical at doses which far exceed any anticipated daily human intake. Independent and industry toxicological experts who have reviewed the data agree that the findings of the study do not indicate a health risk to human beings.

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.

TERATOGENICTY (BIRTH DEFECTS)

There were no birth defects or adverse effects on reproductive parameters in tests with rats and rabbits for piperonyl butoxide. They are no considered to be teratogenic.

Permethrin was not teratogenic when tested in rats.

MUTAGENICITY (GENETIC EFFECTS)

PBO was not genotoxic in several tests including the Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

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 and aquatic invertebrates.

OTHER ENVIRONMENTAL INFORMATION:

Do not apply directly to water. Do not contaminate water by disposal of wastes.

SECTION 13 – DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions.

CONTAINER DISPOSAL: Do not incinerate or puncture. If empty: Place in trash or offer for recycling if available.

RCRA INFORMATION

RCRA HAZARDOUS WASTE INGREDIENTS: None

SECTION 14 – TRANSPORT INFORMATION

D.O.T. PROPER SHIPPING NAME:	Consumer Commodity
RQ:	NA
D.O.T. HAZARD CLASS:	ORM-D
U.N./N.A. NUMBER:	NA
REMARKS:	NA
EXEMPTION REQUIREMENT:	49 CFR 173.306
NOTE:	For transport purposes (49 CFR Part 173.132), the calculated 1-hour LC 50 is: >18.92 mg/l.

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: 5602-209-72159

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
51-03-6	Piperonyl butoxide	= 0.50
7696-12-0	Tetramethrin	= 0.10
52645-53-1	Permethrin	= 0.25

SARA Title III:

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

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

REGULATED INGREDIENTS

INGREDIENT: Piperonyl butoxide
CAS NUMBER: 51-03-6 PERCENT BY WEIGHT: = 0.50
Regulations: SARA Section 313 Toxic Chemical
State right-to-know: NJ
Canadian Domestic Substance List (DSL)
EINECS No. 200-076-7

INGREDIENT: Tetramethrin
CAS NUMBER: 7696-12-0
PERCENT BY WEIGHT: = 0.10
Regulations: SARA Section 313 Toxic Chemical
European Inventory of Existing Commercial Substances (EINECS)

INGREDIENT: Permethrin
CAS NUMBER: 52645-53-1
PERCENT BY WEIGHT: = 0.25
Regulations: State right-to-know: NJ, MA
SARA Section 313 Toxic Chemical
European Inventory of Existing Commercial Substances (EINECS)

INGREDIENT: Aliphatic Petroleum Distillates
CAS NUMBER: 64742-47-8
PERCENT BY WEIGHT: < 99
Regulations: Canadian DSL
EINECS

INGREDIENT: Carbon dioxide
CAS NUMBER: 124-38-9
PERCENT BY WEIGHT: < 5
Regulations: State right-to-know: IL, NJ, MA, PA

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:	1 Slight
- FIRE:	2 Moderate
- REACTIVITY:	0 Negligible
- PROTECTION:	B

NFPA HAZARD RATING

- HEALTH:	1 Slight
- FIRE:	2 Moderate
- 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: 0

REVISION DATE: 03/15/04

SUPERSEDES DATE: New

EPA REGISTRY NUMBER: 73049-161

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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