



Material Safety Data Sheet

SCOURGE INSECTICIDE WITH RESMETHRIN/PIPERONYL BUTOXIDE 18% + 54% MF FORMULA II

MSDS Number: 102000004839
 MSDS Version 2.0
 Revision Date: 06/15/2006

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name SCOURGE INSECTICIDE WITH RESMETHRIN/PIPERONYL BUTOXIDE 18% + 54% MF FORMULA II
MSDS Number 102000004839
EPA Registration No. 432-667
Product Use A synthetic pyrethroid for effective adult mosquito, midge and blackfly control. This product has a restricted use classification and can be used only by Certified Applicators or persons under the supervision of such applicators.

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. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Resmethrin	10453-86-8	18.00
Piperonyl butoxide	51-03-6	54.00
Naphthalene	91-20-3	24.65

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution! Hazard to humans and domestic animals. Highly toxic to fish. Keep out of the reach of children.

Appearance amber

Routes of Exposure Eye contact, Skin contact, Ingestion

Immediate Effects

Skin Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Chronic or Delayed Long-Term This material has been classified as a possible carcinogen (see Section 11).



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Medical Conditions None known.
Aggravated by Exposure

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin	Wash off with soap and water. If symptoms persist, call a physician.
Ingestion	Never give anything by mouth to an unconscious person. Obtain medical attention. More severe effects if alcohol is consumed. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.
Inhalation	If coughing, difficult breathing or other symptoms of poisoning occur, even after several hours, call a physician immediately. Move to fresh air. Keep patient warm and at rest.
Notes to Physician Signs and Symptoms	The following symptoms may occur: headache nausea May cause stuffy or runny nose and scratchy throat.
Hazards	Risk of solvent pneumopathy. This product contains a pyrethroid.
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. Cold cream or a moisturizing cream has been successful in diminishing the symptoms associated with localized paresthesia. If localized paresthesia develops, the site should be thoroughly washed with soap and water.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	74 °C / 165 °F
Suitable Extinguishing Media	carbon dioxide (CO2), dry chemical, foam



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Fire Fighting Instructions

Keep unnecessary people away, isolate hazard area and deny entry. Avoid contact with spilled product or contaminated surfaces. Dike area to prevent runoff and contamination of water sources. Keep out of smoke. Fight fire from upwind position.

Cool containers with water from the farthest possible distance away. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Equipment or materials involved in pesticide fires may become contaminated. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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

Dust Explosion Class

Not applicable.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with spilled product or contaminated surfaces. Isolate hazard area. Keep unauthorized people away. Refer to protective measures listed in sections 7 and 8.

Methods for Cleaning Up

Eliminate all sources of ignitions until the area is determined to be free from explosion of fire hazards. Prevent further leakage or spillage. Clean up immediately, observing precautions outlines in Section 8. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Clean contaminated floors and objects thoroughly, observing environmental regulations. Dispose in accordance with all local, state/provincial and federal regulations.

Additional Advice

Do not flush into surface water or sanitary sewer system. Do not create a powder cloud by using a brush or compressed air. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material and dispose of as hazardous waste. Clean-up methods - small spillage Place in an approved chemical waste container for disposal. Rinse spill area with small amount of soapy water. Rinse away with water.



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Remove all sources of ignition. Clean-up methods - large spillage To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Stop leak if you can do so without coming into contact with spilled material. Dike far ahead of liquid spill for later disposal. Prevent entry into waterways, sewers, basements or confined areas. Inform appropriate authorities immediately if contamination occurs. Contact Bayer for further assistance if necessary.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Avoid contact with skin, eyes and clothing. Handle and open container in a manner as to prevent spillage.
Storing Procedures	Store in original container in a secured, dry storage area. Do not contaminate water, food, or feed by storage or disposal.
Work/Hygienic Procedures	Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	<p>These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.</p> <p>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.</p>
Engineering Controls	Use only with adequate ventilation/personal protection. See below for any OSHA/ACGIH exposure limits.
Eye/Face Protection	Safety glasses with side-shields
Hand Protection	Wear suitable 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



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appropriate regulatory standards and/or Industry recommendations.

Exposure Limits

Naphthalene	91-20-3	ACGIH	TWA		10 ppm
		ACGIH	STEL		15 ppm
		NIOSH	REL	10 ppm	50 mg/m3
		NIOSH	STEL	15 ppm	75 mg/m3
		OSHA Z1	PEL	10 ppm	50 mg/m3
		OSHA Z1A	TWA	10 ppm	50 mg/m3
		OSHA Z1A	STEL	15 ppm	75 mg/m3
		US CA OEL	TWA PEL	10 ppm	50 mg/m3
		US CA OEL	STEL	15 ppm	75 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	amber
Specific Gravity	1.01 at 21 °C
Density	ca. 1.002 g/cm ³ at 20 °C
Bulk Density	8.41 lb/gal at 21 °C
Viscosity	35.6 mPa.s at 21 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Exposure to extreme heat. Sources of ignition.
Incompatibility	strong reducing agents strong oxidizing agents
Hazardous Decomposition Products	Thermal decomposition Carbon monoxide carbon dioxide (CO ₂)
Hazardous Reactions	Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

NOTE: The severity classifications listed above are those of Bayer Environmental Science, and, particularly the eye irritation, may not always coincide with EPA mandated Precautionary Statements.



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Acute Oral Toxicity	rat: LD50: > 2,700 mg/kg Slightly toxic.
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg Slightly toxic.
Acute Inhalation Toxicity	male/female rat: LC50: > 2.6 mg/l Exposure time: 4 h (actual) Determined in the form of liquid aerosol. Maximum attainable concentration. No deaths male/female rat: LC50: > 10.4 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50. (actual) Practically non-toxic.
Skin Irritation	rabbit: Slight irritation.
Eye Irritation	rabbit: Minimally irritating.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	Resmethrin: In a chronic dietary rat study the primary target organ was the liver with secondary effects in the thyroid. Piperonyl Butoxide: In chronic feeding studies in dogs and rats, effects included decreased body weights and/or increased organ weights (liver, kidney, adrenal).

Assessment Carcinogenicity

Resmethrin: EPA has classified the carcinogenic potential of resmethrin as "likely to be a human carcinogen" due to liver tumors in male mice and female rats.

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

ACGIH

Naphthalene	91-20-3	Group A4
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NTP

Naphthalene	91-20-3
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IARC

Piperonyl butoxide	51-03-6	Overall evaluation: 3
Naphthalene	91-20-3	Overall evaluation: 2B



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OSHA
None.

Reproductive & Developmental Toxicity

REPRODUCTION: Resmethrin: In a multi-generation study in rats there was a slight increase in premature stillbirths and a decrease in pup body weights.

Piperonyl Butoxide: There were no reproductive effects observed in a two-generation study in rats.

DEVELOPMENTAL TOXICITY: Resmethrin: Resmethrin is not a primary developmental toxicant based on developmental toxicity studies in rats and rabbits. Any developmental effects observed were secondary to maternal toxicity.

Piperonyl butoxide: Developmental, embryotoxic or teratogenic effects were not produced in developmental toxicity studies in rats and rabbits.

Neurotoxicity

Resmethrin: Resmethrin was not neurotoxic in acute and subchronic studies in rats.

Mutagenicity

Resmethrin: Resmethrin was not mutagenic in a test performed with the bacterium, *Salmonella typhimurium*.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to Fish

Oncorhynchus mykiss (rainbow trout)
LC50: ZCUST-2.40 ppb
Exposure time: 96 h

Bluegill sunfish
LC50: ZCUST-13.00 ppb
Exposure time: 96 h

Cyprinodon variegatus (sheepshead minnow)
LC50: ZCUST-8.80 ppb
Exposure time: 96 h

Toxicity to other organisms

Japanese quail
LC50: > 5,000 ppm
The value mentioned relates to the active ingredient resmethrin.

Mallard duck
LC50: > 5,000 ppm
The value mentioned relates to the active ingredient resmethrin.

California Quail
LD50: > 2,000 mg/kg
The value mentioned relates to the active ingredient resmethrin.



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Environmental Precautions

Highly toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Drift and runoff from treated areas may be hazardous to fish/aquatic organisms in adjacent sites. Consult your State's Fish and Wildlife Agency before treating water areas. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Do not contaminate water, food, or feed by disposal. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste 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.

RCRA Classification:

The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.

91-20-3

Naphthalene

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): U165

91-20-3

Naphthalene

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U165

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:

RQ, Combustible Liquid, N.O.S. (Naphtalene) // Combustible Liquid // NA1993 // PG III *

* When packages size is equal to or greater than 48.3 gallons the RQ for Naphtalene is met
The RQ for Naphtalene is 100 Lbs.

FREIGHT CLASSIFICATION:

Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION



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EPA Registration No. 432-667

US Federal Regulations

TSCA list

Piperonyl butoxide 51-03-6
Naphthalene 91-20-3

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

Naphthalene 91-20-3

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Resmethrin 10453-86-8 1.0%
Piperonyl butoxide 51-03-6 1.0%
Naphthalene 91-20-3 0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Resmethrin 10453-86-8 Developmental toxin.

US State Right-To-Know Ingredients

Resmethrin 10453-86-8 NJ
Piperonyl butoxide 51-03-6 NJ
Naphthalene 91-20-3 CA, CT, IL, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

Resmethrin 10453-86-8
Piperonyl butoxide 51-03-6
Naphthalene 91-20-3

Environmental

CERCLA

Naphthalene 91-20-3 100 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Resmethrin 10453-86-8
Piperonyl butoxide 51-03-6
Naphthalene 91-20-3



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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: New re-numbering system and sections updated.

Revision Date: 06/15/2006

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