



## AQUA-RESLIN®

MSDS Version 1.4

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** AQUA-RESLIN®  
**Chemical Name** Mixture; a.i., permethrin, piperonyl butoxide  
**Synonym**  
**MSDS Number** 11  
**Chemical Family**  
**Chemical Formulation**  
**EPA Registration No.** 432-796  
**Canadian Registrat. No.**

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

**Product Use Description** A synthetic pyrethroid for effective adult mosquito, midge and blackfly control.

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Permethrin	52645-53-1	20.0000	
Piperonyl butoxide	51-03-6	20.0000	
Odorless mineral spirits	8052-41-3	10.0000	

# Material Safety Data Sheet

AQUA-RESLIN<sup>®</sup>

MSDS Number: 00000000011

MSDS Version 1.4

## SECTION 3. HAZARDS IDENTIFICATION

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

### Emergency Overview

Caution. Keep out of the reach of children. Hazard to humans and domestic animals. Harmful if swallowed. Wash thoroughly with soap and water after handling. This product is extremely toxic to fish and aquatic invertebrates. This product is highly toxic to bees exposed to direct treatment of residues on blooming crops or weeds.

### Physical State

liquid

### Odor

Very mild paint or brake-fluid

### Appearance

Cream to tan

### Routes of Exposure

Inhalation and ingestion.

### Immediate Effects

#### Eye

May cause slight irritation.

#### Skin

May cause slight irritation.

#### Ingestion

Harmful if swallowed.

### Chronic or Delayed Long-Term

Refer to Section 11 for chronic feeding study in rats under extreme experimental test doses.

## SECTION 4. FIRST AID MEASURES

### Eye

Flush eyes with plenty of water. Get medical attention if irritation persists.

### Ingestion

Call a physician or Poison Control Center. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Avoid alcohol. May pose an aspiration pneumonia hazard.

### Note to Physician

This product contains a synthetic pyrethroid and a petroleum solvent. If ingested and vomiting has not occurred, emesis should be induced with supervision. Keep patient's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered. DO NOT administer or instill milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances. If localized paresthesia develops, the site should be thoroughly washed with soap and water. Cold cream can be applied to diminish the effect.

# Material Safety Data Sheet

**AQUA-RESLIN®**

MSDS Number: 00000000011

MSDS Version 1.4

## SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	> 93 °C / > 199 °F Method: Tagliabue Closed Cup
<b>Suitable Extinguishing Media</b>	carbon dioxide (CO2), dry chemical, foam, water
<b>Fire Fighting Instructions</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>General and Disposal</b>	Soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.
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## SECTION 7. HANDLING AND STORAGE

<b>Handling Procedures</b>	Wash thoroughly with soap and water after handling.
<b>Storing Procedures</b>	Store upright at room temperature. Do not contaminate water, food, or feed by storage or disposal.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Eye/Face Protection</b>	safety glasses
<b>Body Protection</b>	impervious gloves

### Exposure Limits

Odorless mineral spirits	8052-41-3	ACGIH	TWA	100 ppm
		NIOSH	REL	350 mg/m3
		NIOSH	Ceil_Time	1,800 mg/m3
		OSHA Z1	PEL	500 ppm 2,900 mg/m3
		OSHA Z1A	TWA	100 ppm 525 mg/m3
		US CA OEL	TWA PEL	100 ppm 525 mg/m3

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Cream to tan
<b>Physical State</b>	liquid

# Material Safety Data Sheet

MSDS Number: 00000000011  
MSDS Version 1.4

## AQUA-RESLIN®

<b>Odor</b>	Very mild paint or brake-fluid
<b>pH</b>	5.1
<b>Specific Gravity</b>	1.015 at 22 °C
<b>Density</b>	8.46 lbs/gal
<b>Solubility (in water)</b>	soluble
<b>Viscosity</b>	170 cp 23 °C

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Conditions to Avoid</b>	extreme temperatures
<b>Hazardous Polymerization (Conditions to avoid)</b>	Will not occur

### SECTION 11. TOXICOLOGICAL INFORMATION

<b>Acute Oral Toxicity</b>	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rat: LD50: 1,000 mg/kg Slightly toxic.
<b>Acute Dermal Toxicity</b>	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rabbit: LD50: > 5,000 mg/kg Practically non-toxic.
<b>Acute Inhalation Toxicity</b>	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rat: LC50: > 2.87 mg/l 4 h Practically non-toxic.
<b>Skin Irritation</b>	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7

# Material Safety Data Sheet

MSDS Number: 00000000011

**AQUA-RESLIN®**

MSDS Version 1.4

which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.  
Rabbit: Slightly irritating

## Eye Irritation

The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.  
Rabbit: Slightly irritating.

## Sensitization

The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.  
Guinea pig: Non-sensitizing

THE FOLLOWING DATA WERE DEVELOPED WITH: permethrin and piperonyl butoxide, the active ingredients.

## Chronic Toxicity

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.

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.

## Assessment Carcinogenicity

### ACGIH

None

### NTP

None

### IARC

Permethrin

52645-53-1

3

Piperonyl butoxide

51-03-6

3

### OSHA

None

## Reproductive & Developmental Toxicity

Reproductive performance and offspring development in rats were unaffected when piperonyl butoxide was fed at dietary concentrations of up to 1000 ppm over two successive generations.

## Teratogenicity

Permethrin was not teratogenic when tested in rats. There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits for piperonyl butoxide. It is not considered to be teratogenic.

## Mutagenicity

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

# Material Safety Data Sheet

**AQUA-RESLIN®**

MSDS Number: 00000000011

MSDS Version 1.4

Piperonyl Butoxide 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.

## SECTION 12. ECOLOGICAL INFORMATION

### Environmental Precautions

This pesticide is extremely toxic to fish and other invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below 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 rinsate. Do not apply when wind speeds exceed 10 MPH. 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 apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Do not apply when wind speeds exceed 10 mph.

This product is highly toxic to bees exposed to direct treatment of residues on blooming crops or weeds. Do not apply it or allow it to drift to crops or weeds on which bees are actively foraging. Applications should be timed to provide maximum possible interval between treatment and the next period of bee activity.

## SECTION 13. DISPOSAL CONSIDERATIONS

### General Disposal Guidance

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste disposal facility.

### Container Disposal

Metal Containers: 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.

Plastic Containers: Triple rinse or equivalent. 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. If burned, stay out of smoke.

### RCRA Classification

Not Regulated under this Statute

# Material Safety Data Sheet

**AQUA-RESLIN®**

MSDS Number: 00000000011

MSDS Version 1.4

## SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not DOT Regulated

NOTE: For transport purposes (49 CFR Part 173.132), the calculated 1-Hour LC50 (Rat) is: 11.48 mg/l.

## SECTION 15. REGULATORY INFORMATION

### US Federal Regulations

**EPA Registration No.** 432-796

#### TSCA list

Piperonyl butoxide 51-03-6  
Odorless mineral spirits 8052-41-3

#### TSCA 12b export notification

None

#### SARA Title III - section 302 - notification and information

None

#### SARA Title III - section 313 - toxic chemical release reporting

Permethrin 52645-53-1 1.0%  
Piperonyl butoxide 51-03-6 1.0%

### US States Regulatory Reporting

#### CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

### US State right-to-know ingredients

Permethrin	52645-53-1	NJ
Piperonyl butoxide	51-03-6	NJ
Odorless mineral spirits	8052-41-3	CA, IL, MN, PA, RI

### Canadian Regulations

#### Canadian Registrat. No.

#### Canadian Domestic Substance List

Piperonyl butoxide 51-03-6  
Odorless mineral spirits 8052-41-3

### Environmental

#### CERCLA

None

#### Clean Water Section 307 Priority Pollutants

None

#### Safe Drinking Water Act Maximum Contaminant Levels

# Material Safety Data Sheet

MSDS Number: 00000000011

**AQUA-RESLIN®**

MSDS Version 1.4

None

## International Regulations

### EU Classification

None

### European Inventory of Existing Commercial Substances (EINECS)

Permethrin 52645-53-1

Piperonyl butoxide 51-03-6

Odorless mineral spirits 8052-41-3

## SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	1	1	0	B
NFPA	1	1	0	

MSDS REVISION INDICATOR: Company address change.

Revision Date: 06/07/2006

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