

Safety Data Sheet

**Section 1: Identification****Product identifier**

- Product Name** • **Perm-X UL 31-66**
- Synonyms** • 100208937; 100208985; 100208986; 100208987; 100208988; EPA Reg. No.: 89459-45
- Product Description** • Clear, pale amber liquid.

Relevant identified uses of the substance or mixture and uses advised against

- Recommended use** • Insecticide.
- Restrictions on use** •
Keep out of reach of children. Avoid release to the environment. Avoid contact with skin, eyes, or clothing. Do not take internally.

Details of the supplier of the safety data sheet

- Manufacturer** • Central Garden & Pet Company
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173
United States

www.centralmosquitocontrol.com

Emergency telephone number

- Manufacturer** • 1-800-234-2269
- Manufacturer** • 1-800-424-9300 - CHEMTREC
- Manufacturer (Transportation)** • 1-703-527-3887 - Chemtrec - Outside US collect calls accepted

Section 2: Hazard Identification**United States (US)**

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

- OSHA HCS 2012** • Acute Toxicity Oral 4
Acute Toxicity Inhalation 4
Specific Target Organ Toxicity Single Exposure 1
Skin Sensitization 1

Label elements

OSHA HCS 2012

WARNING



- Hazard statements** • Harmful if swallowed
 Harmful if inhaled
 Causes damage to organs - nervous system.
 May cause an allergic skin reaction

Precautionary statements

- Prevention** • Do not breathe dust, fume, gas, mist, vapors and/or spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves.
- Response** • IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 Rinse mouth.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed: Call POISON CENTER or doctor/physician.
- Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
 Avoid release to the environment.
 Store locked up.

Other hazards

OSHA HCS 2012

- This product is extremely toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Mixtures

Composition		
Chemical Name	Identifiers	%
Permethrin	CAS:52645-53-1	31%
Piperonyl butoxide	CAS:51-03-6	66%
Other ingredients	NDA	Balance

Section 4: First-Aid Measures

Description of first aid measures

- Inhalation**
 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor if you feel unwell.
- Skin**
 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If irritation or rash occurs, get medical advice/attention.
- Eye**
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion**
 - IF SWALLOWED: Call a poison control center or doctor for treatment advice.

Most important symptoms and effects, both acute and delayed

- Causes damage to organs - nervous system. Harmful if inhaled. Harmful if swallowed. May cause an allergic skin reaction in individuals with a sensitivity to piperonyl butoxide. Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Extinguishing media

- Suitable Extinguishing Media** • SMALL FIRES: Dry chemical, CO2, water spray or regular foam.
- Unsuitable Extinguishing Media** • Avoid heavy hose streams.
- Firefighting Procedures** • Do not use direct stream of water. A direct stream of water may spread fire. Do not allow fire fighting water to escape into waterways or sewers.

Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards** • None known.
- Hazardous Combustion Products** • Decomposes upon heating to produce toxic vapors/gases which may include hydrogen chloride, carbon oxides and nitrogen oxides.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** • Avoid breathing fumes. Wear appropriate personal protective equipment, avoid direct contact. Keep all sources of ignition away.
- Emergency Procedures** • Stop leak if you can do it without risk. Avoid release into the environment. Avoid

unnecessary personnel and equipment traffic in the spill area. Do not allow runoff into water, storm drains or drainage ditches. Wear appropriate personal protective equipment (PPE).

Environmental precautions

- Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Cover liquid spill with sand, earth or other non-combustible absorbent material. Wear appropriate personal protective equipment, avoid direct contact. Prevent entry into waterways, sewers, basements or confined areas.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Handle and open container with care. Avoid release to the environment. Do not breathe (dust, vapor or spray mist) Use only in well ventilated areas. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Wear appropriate personal protective equipment, avoid direct contact.

Conditions for safe storage, including any incompatibilities

Storage

- Keep out of reach of children. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep from freezing. Store away from oxidizers strong acids and strong bases. Do not use or store near heat or open flame.

Incompatible Materials or Ignition Sources

- Strong acids, strong bases, and oxidizing agents.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment

Pictograms



Respiratory

- In case of insufficient ventilation, wear suitable NIOSH approved respiratory protection.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Environmental Exposure Controls

- Avoid release to the environment.

Other Information

- See product label for specific use PPE instructions.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Clear, pale amber liquid.
Color	Pale amber.	Odor	Slight solvent and licorice.
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	1.08 - 1.09 g/cc (9.01 - 9.10 lb/gal)	Water Solubility	Insoluble
Viscosity	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	260°F (127°C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- Non-reactive under normal handling and storage conditions.

Chemical stability

- Stable

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid storage with or near toxic substances. Direct sunlight. Excessive heat >110°F.

Incompatible materials

- Heat, strong acids, strong bases and oxidizing agents.

Hazardous decomposition products

- Decomposes upon heating to produce toxic vapors/gases which may include oxides of carbon and nitrogen, hydrogen chloride.

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Permethrin (31%)	52645-53-1	Acute Toxicity: Ingestion/Oral-Rat LD50 • 500 mg/kg; Inhalation-Rat LC50 • 2.65 mg/L 4 Hour(s); Skin-Rabbit LD50 • >2000 mg/kg; Irritation: Eye-Rabbit • Mild irritation; Skin-Rabbit • Essentially non-irritating
Piperonyl butoxide (66%)	51-03-6	Acute Toxicity: Ingestion/Oral-Rat • 4300 mg/kg; Inhalation-Rat • >5 mg/L 4 Hour(s); Skin-Rat LD50 • >2000 mg/kg; Irritation: Eye-Rabbit • Essentially non-irritating; Skin-Rabbit • Essentially non-irritating

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • Acute Toxicity - Dermal - Classification criteria not met; Acute Toxicity - Inhalation 4; Acute Toxicity - Oral 4
Skin corrosion/Irritation	OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	OSHA HCS 2012 • Classification criteria not met
Skin sensitization	OSHA HCS 2012 • Skin Sensitizer 1
Respiratory sensitization	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	OSHA HCS 2012 • Classification criteria not met
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 1
STOT-RE	OSHA HCS 2012 • Classification criteria not met

Route(s) of entry/exposure • Inhalation, skin, eye, and ingestion.

Potential Health Effects

Inhalation

Acute (Immediate)

- Harmful if inhaled. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide. Contact with permethrin may cause reversible skin sensations (paresthesia) which may include numbing, burning or tingling.

Chronic (Delayed)

- No data available

Eye

Acute (Immediate)

- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)

- No data available

Ingestion

Acute (Immediate)

- Harmful if ingested. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Chronic (Delayed)

- No data available

Mutagenic Effects

- Permethrin was not mutagenic in a battery of in vitro and in vivo tests. Piperonyl butoxide was not mutagenic in a battery of tests.

Carcinogenic Effects

- Permethrin is not classified as carcinogen by NTP, IARC and OSHA. Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA.

Reproductive Effects

- Permethrin does not cause developmental or reproductive effects. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits.

Section 12 - Ecological Information

Toxicity

Components		
Permethrin (31%)	52645-53-1	<p>Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Blue gill</i> 0.00079 mg/L [Acute] 96 Hour(s) LC50 <i>Atlantic silverside</i> 0.0022 mg/L [Acute] NOEC <i>Fathead minnow</i> 0.0003 mg/L [Chronic] NOEC <i>Sheepshead minnow</i> 0.00083 mg/L [Chronic] Aquatic Toxicity-Crustacea: NOEC <i>Daphnia magna</i> 0.000039 mg/L [Chronic] NOEC <i>Mysid shrimp</i> 0.000011 mg/L [Chronic] LC50 <i>Hexagenia bilineata</i> 0.0001 mg/L [Acute] 96 Hour(s) LC50 <i>Mysid shrimp</i> 0.000019 mg/L [Acute]</p>
Piperonyl butoxide (66%)	51-03-6	<p>Aquatic Toxicity-Fish: LC50 <i>Rainbow Trout</i> 1.9 mg/L [Acute] LC50 <i>Sheepshead minnow</i> 3.94 mg/L [Acute] NOEC <i>Fathead minnow</i> 0.04 mg/L [Chronic] Aquatic Toxicity-Crustacea: LC50 <i>Gammarus fasciatus (amphipod)</i> 0.51 mg/L [Acute] LC50 <i>Mysid shrimp</i> 0.49 mg/L [Acute] NOEC <i>Daphnia magna</i> 0.03 mg/L [Chronic]</p>

Persistence and degradability

- Permethrin has a moderate rate of degradation in soil and half-life is related to soil type, microbial population, concentration in the soil and the aerobic condition of the soil.

Bioaccumulative potential

- Permethrin has a Log Pow of 6.1, but because of the ease with which biological systems degrade the molecule, the potential for bioconcentration and accumulation in the environment is low (BCF = 500). Permethrin: Bioconcentration factor (BCF) 300; Does not bioaccumulate.

Mobility in Soil

- Permethrin has a high affinity for organic matter (Koc = 86,000), there is little potential for movement in soil or entry into groundwater. Permethrin: Immobile in soil.

Other adverse effects

Potential Environmental Effects

- This pesticide is extremely toxic to aquatic organisms including fish and invertebrates. Care should be taken to avoid contamination of the aquatic environment. This product is highly toxic to bees.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Do not allow entry into storm drains, drainage ditches, gutters or surface waters.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. See product label for disposal instructions.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN3082	Bulk packaging only: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Marine Pollutant
IMO/IMDG	UN3082	Packaging 5 L or greater: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Marine Pollutant
IATA/ICAO	UN3082	Packaging 5 L or greater: Environmentally hazardous substance, liquid, n.o.s (Permethrin and Piperonyl butoxide)	9	III	Acute Aquatic Toxicity

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Other information

IMO/IMDG • No data available

IATA/ICAO • No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • SARA Title III Section 313, Acute

FIFRA – Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION

Hazard Statements • KEEP OUT OF REACH OF CHILDREN

Precautionary Statements •

Hazards to Humans and Domestic Animals

Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Prolonged or repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or the toilet. Remove contaminated clothing and wash before reuse.

First Aid •

If swallowed• Call a poison control center or doctor immediately• Do not induce vomiting unless told to by a poison control center or doctor• Do not give any liquid to the person• Do not give anything by mouth to an unconscious personIf on skin or clothing• Take off contaminated clothing• Rinse skin immediately with plenty of water for 15-20 minutes• Call a poison control center or doctor for treatment advicelf 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 advicelf inhaled• Move person 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 treatment advice.

Environmental Hazards •

This product is extremely toxic to aquatic organisms including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and other aquatic organisms. Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate water when disposing of equipment washwaters. This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Physical or Chemical Hazards • Do not use or store near heat or open flame.

Inventory		
Component	CAS	TSCA
Permethrin	52645-53-1	No
Piperonyl butoxide	51-03-6	Yes

United States

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Permethrin	52645-53-1	1.0 % de minimis concentration
• Piperonyl butoxide	51-03-6	1.0 % de minimis concentration

Section 16 - Other Information

Revision Date • 07/March/2016

Last Revision Date

- 07/March/2016

Preparation Date

- 07/March/2016

Disclaimer/Statement of Liability

- The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.