Section 1: Identification

Product identifier

Product Name • Pyronyl 525 Oil Concentrate

Synonyms • 100208911; 100208912; 100208913; 100528647, EPA Reg. No.: 89459-24

Product Description • Yellow to amber liquid.

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

Recommended use • Insecticide.

Restrictions on use • KEEP OUT OF THE REACH OF CHILDREN. Avoid release to the environment. Do not take internally. Avoid inhalation of vapors or fumes. Avoid contact with eyes, skin or clothing.

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.zoecon.com

Emergency telephone number

Manufacturer (Transportation) • 1-800-424-9300 - CHEMTREC
Manufacturer (Transportation) • 1-703-527-3887 - Chemtrec - Outside US collect calls accepted
Manufacturer • 1-800-248-7763

Section 2: Hazard Identification

United States (US)
According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Aspiration 1
Skin Irritation 2
Skin Sensitization 1
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects

Label elements

OSHA HCS 2012
DANGER
Hazard statements

- Causes skin irritation
- May be fatal if swallowed and enters airways
- May cause an allergic skin reaction
- May cause drowsiness or dizziness

Precautionary statements

Prevention

- Wash thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing dust, fume, gas, mist, vapors and/or spray.
- Use only outdoors or in a well-ventilated area.

Response

- IF ON SKIN: Wash with plenty of soap and water.
- Specific treatment, see supplemental first aid information.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Do NOT induce vomiting.
- IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.

Storage/Disposal

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed.

Other hazards

OSHA HCS 2012

- This product is toxic to aquatic organisms, including fish and invertebrates. This product is 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.

Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins</td>
<td>CAS:8003-34-7</td>
<td>5%</td>
</tr>
<tr>
<td>Piperonyl butoxide*</td>
<td>CAS:51-03-6</td>
<td>25%</td>
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<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>CAS:64742-47-8</td>
<td>20%</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>NDA</td>
<td>50%</td>
</tr>
</tbody>
</table>

*(butylcarbityl)(6-propylpiperonyl) ether 80% Other related compounds 20%

Section 4: First-Aid Measures
Description of first aid measures

Inhalation

• IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor for further treatment advice.

Skin

• IF ON SKIN: Wash with plenty of soap and water. 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: Immediately call a poison control center or doctor. Aspiration hazard - if swallowed, do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

• Aspiration hazard; skin irritant, may cause an allergic skin reaction in individuals with a sensitivity to piperonyl butoxide, may cause dizziness and/or drowsiness if vapor is inhaled. 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

• LARGE FIRE: Water spray, fog or regular foam.

SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing Media

• Avoid heavy hose streams.

Firefighting Procedures

• Do not allow fire fighting water to escape into waterways or sewers.

LARGE FIRES: Dike fire control water for later disposal; do not scatter the material.

LARGE FIRES: Move containers from fire area if you can do it without risk. Stay upwind.

Ventilate closed spaces before entering.

Do not breathe gas/fumes/vapor/spray.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

• No data available.

Hazardous Combustion Products

• May decompose upon heating to produce toxic gases or fumes.

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
- Do not walk through spilled material. Ventilate enclosed areas. Wear appropriate personal protective equipment, avoid direct contact.

Emergency Procedures
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate closed spaces before entering. Avoid release into the environment.

Environmental precautions
- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up
Containment/Clean-up Measures
- Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal.
  All equipment used when handling the product must be grounded.
  LARGESPILLS: Dike far ahead of spill for later disposal.
  Stop leak if you can do it without risk.

Section 7 - Handling and Storage

Precautions for safe handling
Handling
- Keep away from fire - No Smoking. Avoid breathing fumes. Use only in well ventilated areas. Wear appropriate personal protective equipment, avoid direct contact.

Conditions for safe storage, including any incompatibilities
Storage
- Store locked up. Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources. Keep from freezing. Keep container tightly closed. Do not store at temperatures exceeding 130°F.

Incompatible Materials or Ignition Sources
- Heat, sparks, open flame. Strong acids, oxidizing agents and caustic substances.

Other Information
- See product label for additional information.

Section 8 - Exposure Controls/Personal Protection

Control parameters
Exposure Limits/Guidelines
- No data available.

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins (8003-34-7) TWAs</td>
<td>5 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
</tr>
</tbody>
</table>

Exposure controls
Engineering Measures/Controls
- Use adequate ventilation to remove vapors (fumes, dust, etc.)

Personal Protective Equipment
Pictograms

Respiratory
- In case of insufficient ventilation, wear suitable NIOSH approved respiratory protection. See product label for specific respirator use requirements.
Eye/Face • Wear chemical splash safety goggles.

Hands • Wear appropriate gloves.

Skin/Body • If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Environmental Exposure Controls • Refer to Section 13 - Disposal Considerations.

Other Information • See product label for specific use PPE instructions.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Liquid</th>
<th>Appearance/Description</th>
<th>Yellow to amber liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Form</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Yellow to amber.</td>
<td>Odor</td>
<td>Pleasant woodsy.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 | 0.89 g/ cc (7.4 lb/gal) | Density | No data available |
| Water Solubility | Insoluble | Viscosity | No data available |
| Critical Temperature | No data available |                         |                         |

Volatile

| Vapor Pressure | No data available | Vapor Density | No data available |
| Evaporation Rate | No data available |                         |                         |

Flammability

| Flash Point | 201°F (94°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 • Direct sunlight. Do not freeze. Excessive heat >110°F. Heat, sparks, open flame, other ignition sources, and oxidizing conditions.
Incompatible materials

- Store away from oxidizers.

Hazardous decomposition products

- Carbon dioxide and possibly carbon monoxide.

Section 11 - Toxicological Information

Information on toxicological effects

<table>
<thead>
<tr>
<th>Components</th>
<th>Acute Toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins (5%)</td>
<td>Ingestion/Oral-Rat, adult female LD50 • 1030 mg/kg; Ingestion/Oral-Rat, adult male LD50 • 2370 mg/kg; Inhalation-Rat LC50 • 3.4 mg/L; Skin-Rat LD50 • 2000 mg/kg</td>
</tr>
<tr>
<td>Piperonyl butoxide (25%)</td>
<td>Ingestion/Oral-Rat, adult female LD50 • 4570 mg/kg; Inhalation-Rat LC50 • &gt;5.9 mg/L; Skin-Rat LD50 • &gt;2000 mg/kg</td>
</tr>
</tbody>
</table>

GHS Properties

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Skin corrosion/Irritation</td>
</tr>
<tr>
<td>Serious eye damage/Irritation</td>
</tr>
<tr>
<td>Skin sensitization</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
</tr>
<tr>
<td>Toxicity for Reproduction</td>
</tr>
<tr>
<td>STOT-SE</td>
</tr>
<tr>
<td>STOT-RE</td>
</tr>
</tbody>
</table>

Potential Health Effects

Inhalation

- Acute (Immediate): May cause drowsiness and dizziness.
- Chronic (Delayed): No data available

Skin

- Acute (Immediate): Causes skin irritation. May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide.
- 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): Aspiration hazard - small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.
Chronic (Delayed)  
- No data available

Mutagenic Effects  
- 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. Pyrethrins were not found to be genotoxic and did not damage DNA in any study conducted which included: Ames assay, chromosome aberration in Chinese hamster ovaries (CHO) cells and in the unscheduled DNA synthesis (UNS) assay in cultured human liver cells.

Carcinogenic Effects  
- Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA. Pyrethrins are not listed as a carcinogen by OSHA, IARC, or NTP.

Reproductive Effects  
- Pyrethrins did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits.

Section 12 - Ecological Information

### Toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Aquatic Toxicity-Fish:</th>
<th>Aquatic Toxicity-Crustacea:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins (5%)</td>
<td>96 Hour(s) LC50 Rainbow trout 0.0051 mg/L [Acute]</td>
<td>NOEC Sheepshead minnow 0.0059 mg/L [estimated chronic]</td>
</tr>
<tr>
<td>8003-34-7</td>
<td>96 Hour(s) LC50 Sheepshead minnow 0.016 mg/L [Acute]</td>
<td>Aquatic Toxicity-Crustacea: NOEC Daphnia magna 0.00086 mg/L [Chronic]</td>
</tr>
<tr>
<td></td>
<td>96 Hour(s) NOEC Fathead minnow 0.0019 mg/L [Chronic]</td>
<td>NOEC Mysis shrimp 0.0001 mg/L [Estimated chronic]</td>
</tr>
<tr>
<td></td>
<td>NOEC Sheepshead minnow 0.0059 mg/L [estimated chronic]</td>
<td>96 Hour(s) LC50 Mysis Shrimp 0.0014 mg/L [Acute]</td>
</tr>
<tr>
<td></td>
<td>8003-34-7</td>
<td>NOEC Sheepshead minnow 0.0059 mg/L [estimated chronic]</td>
</tr>
<tr>
<td>Piperonyl butoxide (25%)</td>
<td>96 Hour(s) LC50 Rainbow Trout 1.9 mg/L [Acute]</td>
<td>Aquatic Toxicity-Crustacea: Daphnia magna 0.047 mg/L [Chronic LOEC]</td>
</tr>
<tr>
<td>51-03-6</td>
<td>96 Hour(s) LC50 Sheepshead minnow 3.94 mg/L [Acute]</td>
<td>48 Hour(s) LC50 Daphnia magna 0.51 mg/L [Acute]</td>
</tr>
<tr>
<td></td>
<td>NOEC Fathead minnow 0.04 mg/L [Chronic]</td>
<td>48 Hour(s) LC50 Mysis shrimp 0.49 mg/L [Acute]</td>
</tr>
<tr>
<td></td>
<td>Fathead minnow 0.11 mg/L [Chronic LOEC]</td>
<td>NOEC Daphnia magna 0.03 mg/L [Chronic]</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light (20%)</td>
<td>Aquatic Toxicity-Fish: 96 Hour(s) LC50 Rainbow Trout 2.9 mg/L [Acute]</td>
<td></td>
</tr>
<tr>
<td>64742-47-8</td>
<td>96 Hour(s) LC50 Lepomis macrochirus 2.2 mg/L [Acute]</td>
<td></td>
</tr>
</tbody>
</table>

### Persistence and degradability
- Pyrethrins have low persistence in the environment due to rapid breakdown in presence of UV light.

### Bioaccumulative potential
- No data available.

### Mobility in Soil
- Pyrethrins are relatively immobile in soil.

### Other adverse effects
- Pyrethrins are highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Potential Environmental Effects
- This product is toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.
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. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water by disposal.

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

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packing group</th>
<th>Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOTUN3082</td>
<td>Packaging 20 lbs. or greater: Environmentally Hazardous Substance, Liquid, n.o.s. (Pyrethrins and Piperonyl butoxide)</td>
<td>9</td>
<td>III</td>
<td>RQ= 1 lb. Pyrethrins</td>
</tr>
<tr>
<td>IMO/IMDG UN3082</td>
<td>Packaging 5 L or greater: Environmentally Hazardous Substance, Liquid, n.o.s. (Pyrethrins and Piperonyl butoxide)</td>
<td>9</td>
<td>III</td>
<td>Marine Pollutant</td>
</tr>
<tr>
<td>IATA/ICAO UN3082</td>
<td>Packaging 5 L or greater: Environmentally Hazardous Substance, Liquid, n.o.s. (Pyrethrins and Piperonyl butoxide)</td>
<td>9</td>
<td>III</td>
<td>Acute Aquatic Toxicity</td>
</tr>
</tbody>
</table>

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
- DOT: Environmental Hazards: RQ (Pyrethrins = 1 lb).
- 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

Precautionary Statements
• KEEP OUT OF THE REACH OF CHILDREN.
• Hazards to Humans and •
Domestic Animals

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION: Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

First Aid

IF SWALLOWED: 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.

Note to Physician/Veterinarian: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Environmental Hazards

For Terrestrial Applications: This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. This product 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. Except as specified in the directions for use, 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 contaminate water when disposing of equipment wash-water or rinsate.

For Wide Area Mosquito Adulticide Applications: This pesticide is 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 aquatic invertebrates. When applying as a wide area mosquito adulticide, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply when bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

When applying as a wide area mosquito adulticide, 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.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>Yes</td>
</tr>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>Yes</td>
</tr>
<tr>
<td>Pyrethrins</td>
<td>8003-34-7</td>
<td>No</td>
</tr>
</tbody>
</table>

United States

Environment

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- Pyrethrins 8003-34-7 1 lb final RQ (listed under Pyrethrins); 0.454 kg final RQ (listed under Pyrethrins)
- Piperonyl butoxide 51-03-6 Not Listed
Section 16 - Other Information

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>MSDS Number</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/April/2017</td>
<td></td>
<td>Added new material number</td>
</tr>
</tbody>
</table>

Revision Date: 26/April/2017
Last Revision Date: 13/January/2016
Preparation Date: 27/May/2015

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.