



DATE PREPARED: 3/2/2016

Section 1. Product and Company Identification

Product Name Citronellal 106-23-0 **CAS Number**

Parchem - fine & specialty chemicals

415 Huguenot Street New Rochelle, NY 10801

) (914) 654-6800 **(914)** 654-6899

parchem.com **™** info@parchem.com **EMERGENCY RESPONSE NUMBER**

CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924 All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4): H227 Skin irritation (Category 2): H315 Eye irritation (Category 2A): H319 Skin sensitization (Category 1): H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system: H335

Acute aquatic toxicity (Category 2): H401 Chronic aquatic toxicity (Category 2): H411

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H227: Combustible liquid.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking





DATE PREPARED: 3/2/2016

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/ eye protection/ face protection.

P302 + P352: If On Skin: Wash with plenty of soap and water.

P304 + P340 + P312: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/ physician if you feel unwell.

P305 + P351 + P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313: If eye irritation persists: Get medical advice/ attention.

P362: Take off contaminated clothing and wash before reuse.

P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P391: Collect spillage.

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name Citronellal

Synonym(s) (\pm)-Citronellal, (\pm)-3,7-Dimethyl-6-octenal

Formula $C_{10}H_{18}O$ CAS Number 106-23-0

| COMPONENT | CAS NUMBER | CONCENTRATION |
|-------------|------------|---------------|
| Citronellal | 106-23-0 | <= 100% |

Section 4. First Aid Measures

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Move out of dangerous area.

Inhalation: Move person into fresh air. If not breathing, give artificial respiration. Consult a

physician.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. **Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



(Citronellal)

DATE PREPARED: 3/2/2016

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Indication of any immediate medical attention and special treatment needed: No data available

Section 5. Firefighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides **Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Use water spray to cool unopened containers.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Combustible liquids





DATE PREPARED: 3/2/2016

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Liquid
Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: 207°C (405°F) - lit.

Flash point (Closed Cup): 86°C (187°F) Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: 0.16 hPa (0.12 mmHg) at 20°C (68°F) - OECD Test Guideline 104

Vapor density: No data available

Relative density: 0.857 g/cm³ at 25°C (77°F) - lit.

Water solubility: 0.088 g/l at 25°C (77°F)



(Citronellal)

DATE PREPARED: 3/2/2016

Partition coefficient: n-octanol/water: log Pow: 3.62 at 25°C (77°F) - OECD Test Guideline

107

Auto-ignition temperature: 202°C (396°F) at 1,013 hPa (760 mmHq)

Decomposition temperature: No data available

Viscosity: 1.82 mm2/s at 20°C (68°F) Explosive properties: No data available Oxidizing properties: No data available

Other safety information: No data available

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Strong oxidizing agents, Strong acids, Strong bases

Hazardous decomposition products

Other decomposition products: No data available

In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat: 2,420 mg/kg **Inhalation:** No data available

LD50 Dermal - Rabbit: 2,500 - 5,000 mg/kg

Skin corrosion/irritation

Skin: Rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation: No data available Respiratory or skin sensitization: No data available

Germ cell mutagenicity

Reverse mutation assay: S. typhimurium

Result: Negative



(Citronellal)

DATE PREPARED: 3/2/2016

Carcinogenicity

IARC: No components of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No components of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No components of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

OSHA: No components of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information

RTECS: RH2140000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Section 12. Ecological Information

Toxicity

Toxicity to daphnia and other aquatic invertebrates

Static test EC50: Daphnia magna (Water flea) - 8.7 mg/l (48 h)

Toxicity to algae

Static test EC50: Desmodesmus subspicatus (Scenedesmus subspicatus) -

13.33 mg/l - 72 h

Persistence and degradability: No data available Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety

assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects. No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.





DATE PREPARED: 3/2/2016

Section 14. Transport Information

DOT (US)

NA-Number: 1993

Class: None

Packing group: III

Proper shipping name: Combustible Liquid, N.O.S. (Citronellal)

Poison Inhalation Hazard: No.

IMDG

UN number: 3082

Class: 9

Packing group: Ⅲ EMS-No: F-A, S-F

Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Citronellal)

Marine pollutant: yes

IATA

UN number: 3082

Class: 9

Packing group: III

Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Citronellal)

Further information: EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids

Section 15. Regulatory Information

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard

Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

Citronellal (CAS-No. 106-23-0)

New Jersey Right to Know Components

Citronellal (CAS-No. 106-23-0)



(Citronellal)

DATE PREPARED: 3/2/2016

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

HMIS Rating Health: 2

Flammability: 2 Reactivity: 0

NFPA Rating Health: 2

Flammability: 2 Reactivity: 0

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 3/2/2016

