

HEALTH	2
FLAMMABILITY	2
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Citronellal, Natural
Product Number	0230700
CAS-No.	106-23-0

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992
Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4) H227
Acute toxicity, Oral (Category 4) H302
Skin irritation (Category 2), H315
Skin sensitization (Category 1A) H317
Eye irritation (Category 2A) H319
Specific target organ toxicity (Category 3) H335

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement Warning

Hazard Statement(s)	H227	Combustible liquid
	H302	Harmful if swallowed
	H315	Causes skin irritation
	H317	May cause respiratory irritation
	H319	Causes serious eye irritation
	H335	May cause respiratory irritation

Precautionary Statement(s)	P210 P261 P264 P270 P271 P272 P280 P301+P312 P302+P352 P304+P340 P305+P351+P338 P312 P330 P333+P313 P337+P313 P362 P370+P378 P403+P233 P403+P235 P405 P501	Keep away from heat/sparks/open flames/hot surfaces – No Smoking Avoid breathing dust/fume.gas/mist/vapors/spray Wash skin 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/eye protection/face protection IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell IF ON SKIN: Wash with plenty of soap and water IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth If skin irritation or rash occurs: Get medical advice/attention If eye irritation persists; get medical advice/attention Take off contaminated clothing and wash before reuse In case of fire, use dry sand, dry chemical or alcohol resistant foam for extinction. Store in a well ventilated place. Keep container tightly closed Store in a well-ventilated place. Keep cool. Store locked up Dispose of contents/container to an approved waste disposal plant.
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2.3 HNOC (Hazards not otherwise classified or not covered by GHS -None)

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms (±)-3,7-Dimethyl-6-octenal

Formula C₁₀H₁₈O
Molecular Weight 154.25 g/mol
CAS-No 154.25
EC-No. 106-23-0

Hazardous Components

Component	Classification	Concentration
Citronellal	Flammable Liquid (4) H227	-
	Skin irritation (2) H315	
	Eye irritation (2A) H319	
	STOT SE (3) H335	
Isopulegol	Flammable Liquid (4) H227	5-10%
	Acute Toxicity, Oral (4)	
	Skin irritation (2) H315	
	Eye irritation (2A) H319	
3,7-Dimethyloctanal	STOT SE (3) H335	1-5%
	Flammable Liquid (4) H227	
	Skin irritation (2) H315	
	Eye irritation (2A) H319	

Citral	Skin irritation (2) H315 Skin sensitisation (1) H317	1-5%
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Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Consult physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation	Provide fresh air; keep at rest and at a comfortable position to breathe. Consult a physician.
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water and contact a physician.
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 as a precaution 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.
Clothing contamination:	Remove contaminated clothing and wash before reuse.

4.2 Most important symptoms and effects both acute and delayed See section 2.2 and or section 11

4.3 Indication of any immediate medical attention and special treatment needed. No data available

Section 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
5.2 Special hazards arising from the substance or mixture	Carbon oxides
5.3 Advice for fire fighters	Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions
5.4 Further information	Use water spray to cool unopened containers.

Section 6: ACCIDENTIAL RELEASE MEASURES

6.1 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 area. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

- 6.2 Environment precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
- 6.3 Methods and materials for containment and clean up** Contain spillage. Soak up with absorbent material. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.
- 6.4 Specific end use(s)** Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

Section 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapor and mist. Keep away from sources of ignition- No smoking. Take measures to prevent the buildup of electrostatic charge
- 7.2 Conditions for Safe storage** 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.
- 7.3 Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Citral	5392-40-5	TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye Damage Body Weight effects 2010 Adoption Not classified as a human carcinogen Danger of cutaneous absorption Sensitizer		

8.2 Exposure Controls

Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the day.

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario

Eye/face protection Wear appropriate safety glasses with side shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection Wear chemically resistant, rubber gloves when handling this product.. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin

contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Body protection	Impervious clothing protecting against chemicals, should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator with multi-purpose 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

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Colorless to slightly yellow liquid
b	Odor	Intense lemon, citronella rose type odor
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	No data available
f	Boiling Point	206°C
g	Flash Point	98°C
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density at 25°C	0.850-0.865
n	Solubility	Insoluble in water & glycerol, soluble in fixed oils & ethanol, slightly soluble in glycol
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available

q	Decomposition Temp,	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	No data available
10.4	Conditions to avoid	Heat, Flames and sparks.
10.5	Incompatible materials	Oxidizing agents, Reducing Agents, Strong Bases
10.6	Hazardous decomposition products	No data available
10.7	Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

LD50-Oral-Rat 2,420 mg/kg

LC50-Inhalation No data available

LD50-Dermal-Rabbit >2,500 mg/kg

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ Cell mutagenicity No data available

Carcinogenicity

IARC

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

ACGIH

No component 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 component 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 component 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

Teratogenicity No data available

Specific target organ toxicity-single exposure (GHS)	Inhalation – May cause respiratory irritation
Specific target organ toxicity-repeated exposures (GHS)	No data available
Aspiration Hazards	No data available
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effect	No data available
RTECS:	Not available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required / not conducted
12.6 Other adverse effects	No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product:	According to local regulations
Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	NA-Number: 1993 Class: None Packing Group: III
Proper shipping name:	Combustible liquid, n.o.s. (3,7-Dimethyloctanal)
Reportable Quantity (RQ)	No
Marine Pollutant:	No
Poison Inhalation Hazard:	No
IMDG	UN-Number: 3082 Class: 9 Packing Group: III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (3,7-Dimethyloctanal)
Marine Pollutant:	No
IATA	UN-Number: 3082 Class: 9 Packing Group: III
Proper shipping name:	Environmentally Hazardous Substance, Liquid, n.o.s. (3,7-Dimethyloctanal)
Further Information:	EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods >5L for liquids or >5kg for solids.

Section 15: REGULATORY INFORMATION

Safety Data Sheet

Reach No.	A registration number is not available for this substance as its uses are exempted from registration, the annual tonnage nod not require a registration or the registration is envisaged for a later registration deadline.		
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# 106-23-0	Rev. Date:
	Isopulegol	CAS# 89-79-2	
	3,7-Dimethyloctanal	CAS# 5988-91-0	
New Jersey Right to Know components	Citronellal	CAS# 106-23-0	Rev. Date:
	Isopulegol	CAS# 89-79-2	
	3,7-Dimethyloctanal	CAS# 5988-91-0	
	Citral	CAS# 5392-40-5	
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.		

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard	2
Chronic Health Hazard*	
Flammability	2
Physical Hazard	0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

Issued by:	Contact Person:
Aurochemicals	Deo N. Persaud
7 Nicoll Street	Revised Date: 8/9/2022
Washingtonville, NY 10992 USA	