

MATERIAL SAFETY DATA SHEET

(Rev.1-Feb-2014)

Citronellyl Formate

Section 1: IDENTIFICATION OF THE SUBSTANCE AND OF COMPANY

Product Name	Citronellyl Formate
Chemical Name	3,7-dimethyloct-6-enyl Formate
CAS No.	105-85-1
EINECS No.	203-338-9
Usage	In flavors and fragrances, an ingredient in the manufacturing of mixtures. Not intended for final consumer.
Manufacturer	Breeze Intermediates Pvt. Ltd. Z-39, Dahej SEZ, Dahej, Ta. Vagra, Dist. Bharuch (Guj.) India Tel.: +91 9825107638 Email: info@breezeipl.com
Emergency telephone no.	+91 9825107638, +91 9925031257

Section 2: HAZARDS IDENTIFICATION

Classification as per EC No. 1272/2008	This substance is not classified as dangerous according to Regulation (EC) No 1272/2008.
Classification as per Dir. 67/548/EEC	This substance is not classified as dangerous according to Directive 67/548/EEC.
OSHA Hazard	Combustible Liquid, Irritant
Label elements including precautionary statement	EC Number: 203-338-9 Citronellyl Formate
Risk Phrases	R36/38 – Irritating to skin and eyes
HMIS Classification	Health hazard: 2 Flammability: 2 Physical hazards: 0
NFPA Rating	Health hazard: 2 Fire: 2 Reactivity Hazard: 0
Potential Health Effects	<u>Inhalation:</u> May be harmful if inhaled. Causes respiratory tract irritation. <u>Skin:</u> May be harmful if absorbed through skin. Causes skin irritation. <u>Eyes:</u> Causes eye irritation. <u>Ingestion:</u> Harmful if swallowed.
Other Hazards	The product does not contain substances included in the Substances of Very High Concern list (> 0.1 % w/w).

Section 3: INFORMATION ON INGREDIENTS

Concentration of the constituent (% wt/wt)	96-100%
Chemical name	3,7-dimethyloct-6-enyl Formate
Chemical Entity	Aryl-substituted primary alcohol/aldehyde/acid/ester/acetal derivatives
Molecular Formula	C ₁₁ H ₂₀ O ₂ (M.W.= 184.28 g/mol)
CAS No.	105-85-1
EC/EINECS No.	203-338-9
FEMA	2314



Section 4: FIRST AID MEASURES

Consumption (Ingestion)	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Do not induce vomiting.
Eye Exposure	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Inhalation	If inhaled, remove person to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Skin Exposure	Wash immediately affected area with soap and plenty of water. Seek medical advice if irritation, pain, swelling, lacrimation or photophobia persists.
Most important symptoms and effects, both acute and delayed	Symptoms on inhalation: Choking, drowsiness, respiratory disruptions. Symptoms on eye contact: Irritation, reddening. Symptoms on skin contact: Irritation, stinging. Symptoms on ingestion: queasiness, stomach aches.
Immediate medical attention special treatment	Not applicable.
Others	Take Risk and Safety Phrases (section 15) into account

Section 5: FIRE-FIGHTING MEASURES

Extinguishing Media	Water spray, Alcohol-resistant foam, carbon dioxide, dry chemical powder or appropriate foam. For safety reasons do not use full water-jet.
Hazards arising from the substance	Not applicable.
Combustible Liquid	Keep away from source of heat, flame or spark. Cool endangered drums with water.
Advices for firefighters	In case of fire on the surrounding, follow the instructions: 1-Closed containers may build up pressure at elevated temperatures. 2-Avoid inhalation of generated fumes or vapors. Use appropriate respiratory equipment. 3-Do not allow the spillage of the fire extinguishing to sink into a drainage system or water area.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Handle the product using protective gloves resistant to the the chemicals exposed. Avoid contact with skin and inhalation of its vapours or smoke. Maintain adequate ventilation in the working area after spilling.
Environmental precautions	To avoid possible contamination of the environment. Do not discharge into any drains, surface waters or groundwaters
Methods and material for	Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash). Place in covered containers using non-sparking tools and transport



containment and cleaning up	outdoors. Avoid open flames or sources of ignition (e.g. pilot lights on gas hot water heater). Ventilate area and wash spill site after material pickup is complete. Dispose of in accordance with current laws and regulations.
Reference to other sections	Refer to section 13 Disposal considerations

Section 7: HANDLING AND STORAGE

Precautions for safe handling	Keep away from food, drink and animal feedingstuffs. When using do not smoke. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice.
Condition for Storage	Should be stored in tightly sealed and preferably full containers in a cool, well-ventilated, dry place, out of direct rays of the sun, Away from areas of high fire hazard, & should be periodically inspected. Incompatible materials should be isolated from each other.
Specific end use(s)	Not available

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	Declaration of substances is not required.
Exposure controls	<p><u>Personal protection equipment:</u> Use personal protection equipment according to Directive 89/686/EEC.</p> <p><u>Eye/Face protection:</u> Chemical safety goggles are recommended. Wash contaminated goggles before reuse.</p> <p><u>Respiratory Protection:</u> Use personal breathing apparatus whenever deemed necessary.</p> <p><u>Skin Protection:</u> Avoid contact with skin. Compatible chemical-resistant gloves are recommended. Wash contaminated gloves before reuse.</p> <p><u>Engineering Controls-Ventilation:</u> The areas where the product is handled and stored should be adequately ventilated.</p>

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid
Odor	Strong fruity, rose odor with a sweet, fruity taste.
Boiling point	235 °C @ 760 mmHg
Flash point (closed cup)	90.56 °C
Ignition Temperature	No data available
Auto Inflammability	Not Determined
Explosive Property	Not Determined
Oxidizing Property	Not Determined
Vapour Pressure	0.030000 mm/Hg @ 25 °C
Vapour Density	6.3 (Air=1)
Solubility in Water	19.61 mg/L @ 25 0C (est.)
Solubility in Alcohol	1 ml soluble in 3 ml 80% Alcohol
Specific Gravity	0.890 – 0.900 @ 25 0C
Partition Coefficient (Octanol/Water)	3.800



Section 10: STABILITY AND REACTIVITY

Chemical stability	Stable under normal operational condition.
Reactivity	Heat, excessive heat, open flames and other sources of ignition. Strong oxidizing agents, strong reducing agents.
Incompatibility	Does not react with water. Avoid contact with strong oxidizing mineral acids, strong reducing agents.
Hazardous decomposition products	Hazardous combustion or decomposition products: carbon oxides and other unidentified organic compound.

Section 11: TOXOLOGICAL INFORMATION

Acute toxicity	Oral LD50: LD50 Oral - rat - 8,400 mg/kg
Inhalation Toxicity (LD ₅₀)	Not Determined
Skin corrosion/irritation	No data available
Human Experience	4% Solution – no irritation or sensitization
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	<u>IARC</u> : No component of this product present at levels $\geq 0.1\%$ is identified as probable, possible or confirmed human carcinogen by IARC. <u>ACGIH</u> : No component of this product present at levels $\geq 0.1\%$ is identified as a carcinogen or potential carcinogen by ACGIH. <u>NTP</u> : No component of this product present at levels $\geq 0.1\%$ is identified as a known or anticipated carcinogen by NTP. <u>OSHA</u> : No component of this product present at levels $\geq 0.1\%$ is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity single exposure (GHS)	No data available
Specific target organ toxicity repeated exposure (GHS)	No data available
Aspiration hazard	No data available
Potential health effects	<u>Inhalation</u> : May be harmful if inhaled. Causes respiratory tract irritation. <u>Ingestion</u> : Harmful if swallowed. <u>Skin</u> : May be harmful if absorbed through skin. Causes skin irritation. <u>Eyes</u> : Causes eye irritation.
Signs and Symptoms of Exposure	No data available
Additional Information	RTECS: RH3480000 for CAS No. 105-85-1

Section 12: ECOLOGICAL INFORMATION

General	Prevent contamination of soil, ground and surface waters. Do not discharge product unmonitored into the environment.
Acute aquatic Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available



Mobility in soil	No data available
PBT and vPvB assessment	Not determined. Not listed on EC's PBT substances list.
Other adverse effects	Do not allow the material to enter streams, sewers or other waterways

Section 13: DISPOSAL CONSIDERATION

Product Disposal	Dispose of according all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Packaging	Don not re-use empty containers. Empty residue into a suitable disposal site. Contaminated packaging should be disposed of as unused product.

Section 14: TRANSPORT INFORMATION

<i>International Carriage of Dangerous Goods by Road (ADR)</i>	
UN No.	N/A
Proper Shipping Name	Not subject to ADR.
Packing Group	---
Class	---
Tunnel restriction code	---
Label	---
<i>Air Transport (ICAO/IATA)</i>	
UN No.	Not Regulated
Proper Shipping Name	Not restricted
Class	---
Packing Group	---
<i>Sea Transport (IMDG)</i>	
UN No.	Not Regulated
Proper Shipping Name	Not restricted
Class	---
Packing Group	---
EmS	---
Marine Pollutant	No
<i>DOT (US)</i>	
NA-Number	
Class	
Packing group	
Proper shipping name	
Poison Inhalation Hazard	

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance	Substance(s) is (are) either included in EINECS, ELINCS, NPL inventories or exempted
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Hazard Symbol	Xi- Irritant
Risk Phrases	R 36/38 - Irritating to skin and eyes.
Safety Phrases	S 02 - Keep out of the reach of children. S 24/25 - Avoid contact with skin and eyes S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36 - wear suitable protective clothing
WGK Germany	2
Chemical safety assessment	Not available
OSHA Hazards	Combustible Liquid, Irritant
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	SARA 313: 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	Citronellyl formate CAS-No. 105-85-1
New Jersey Right To Know Components	Citronellyl formate CAS-No. 105-85-1
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

Hazardous materials identification system	Fire:2 Health:2 Reactivity: 0 Personal Protection:B
This material should be used for industrial purposes only.	

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