

Product Code: ISO-CIT**Product Name:** Citral**Issue date** 23-May-2016**Revision date** 08-Feb-2017**Version** 3**1. Identification of the substance | preparation | company | undertaking****Product identifier****Product name** Citral**Other means of identification****Product code** ISO-CIT**Synonyms** N/A**Registration number(s)** N/A**Recommended use of the chemical and restrictions on use****Recommended Use** Industry Use.**Uses advised against** No information available**Details of the supplier of the safety data sheet**

324 Airport Industrial Dr. Ypsilanti, MI 48198

Emergency telephone number**Company Phone Number** Use CHEMTREC instead of Emergency Phone Number**24 Hour Emergency Phone Number** (800) 424-9300**Emergency telephone****2. Hazard Identification****Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1B

Label Elements**DANGER****Hazard Statements:**

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Appearance Clear**Physical state** Liquid**Odor** Characteristic Odor**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing must not be allowed out of the workplace
 Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see .? on this label)
 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
 IF ON SKIN: Wash with plenty of water and soap
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

- May be harmful in contact with skin
 - Toxic to aquatic life
- 100 % of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

Synonyms Lemarome.
Chemical Family Aliphatic aldehyde.
Formula C10H16O

Botanical Species	CAS No.	Weight-%
Citral	5392-40-5	100

4. First Aid Measures

Description of first aid measures

Eye Contact 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.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Move to fresh air in case of accidental inhalation of vapors. If not breathing, give artificial respiration.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media .

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion, or decomposition.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective actions for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes and inhalation of vapors. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation, especially in confined areas. Wash thoroughly after handling. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Keep locked up and out of reach of children.

Incompatible materials

None known based on information supplied.

8. Exposure Controls/Personal Protection

Control parameters

Exposure guidelines .

Botanical Species	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citral 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	-

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Skin and Body Protection Avoid contact with skin. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. Ensure adequate ventilation, especially in confined areas.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. When using do not eat, drink or smoke. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended. Avoid breathing (dust, vapor, mist, gas).

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state	Liquid	Odor	Characteristic Odor
Appearance	Clear	Odor threshold	Not applicable
Color	Colorless to Pale Yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting point / freezing point	Not applicable	
Boiling point / boiling range	230 °C	
Flash Point	> 93.1 °C / > 200 °F	
Evaporation Rate	Not applicable	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit:	Not applicable	
Lower flammability limit:	Not applicable	
Vapor pressure	0.07	
Vapor Density	Not applicable	
Specific gravity	0.888	
Water solubility	Not applicable	
Solubility in other solvents	Not applicable	
Partition coefficient	Not applicable	
Autoignition Temperature	Not applicable	
Decomposition temperature	Not applicable	
Kinematic viscosity	No data available	
Dynamic viscosity	Not applicable	
Explosive properties	Not applicable	
Oxidizing properties	Not applicable	

Other Information

Softening point	not applicable
Molecular weight	152.24
VOC content (%)	Not applicable
Density	Not applicable
Bulk Density	Not applicable

10. Stability and Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation	Avoid breathing vapors or mists.
Eye Contact	Avoid contact with eyes. Severely irritating to eyes.
Skin contact	Avoid contact with skin. Irritating to skin. May be harmful in contact with skin. May cause an allergic skin reaction.
Ingestion	No data available.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Causes severe eye irritation.
Sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards above the threshold value.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Aspiration hazard	Not classified.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (dermal) 2250 mg/kg

12. Ecological Information

Ecotoxicity

Toxic to aquatic life

0 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. Disposal Considerations

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

14. Transport Information

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. Regulatory Information

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any

chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. Other Information

Issue date 23-May-2016

Revision date 08-Feb-2017

Revision note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Classification and labeling according to the IFRA/IOFI Labeling Manual 2016.

End of Safety Data Sheet