

Material Safety Data Sheet Citral

SECTION 1.1 – PRODUCT IDENTIFICATION

Product Name : Citral
Molecular Formula : C₁₀H₁₆O
Molecular Weight : 152.24
CAS No. : 5392-40-5

SECTION: 1.2 – COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.

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SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS#	% by Weight
Citral	5392-40-5	100

SECTION 3: HAZARD IDENTIFICATION

Labelling according Regulation (EC) No 1272/2008



Pictogram

Signal word

Warning

Hazard statement(s)

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

P280 Wear protective gloves.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements None

Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

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

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

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

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: FIRE AND EXPLOSION DATA

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 firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 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.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510):

Combustible liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

8.2 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

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source:

KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industria situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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

9.1 Information on basic physical and chemical properties

a) Appearance Form: clear, liquid Colour: l ight yellow

b) Odour No data available

- c) Odour Threshold No data available
 d) pH No data available
 e) Melting point/freezing point Melting point/range: < -20 °C at 1,013 hPa
 f) Initial boiling point and boiling range 229 °C - lit.
 g) Flash point 95 °C - closed cup
 h) Evaporation rate No data available
 i) Flammability (solid, gas) No data available
 j) Upper/lower flammability or explosive limits Upper explosion limit: 9.9 %
 (V) Lower explosion limit: 4.3 %(V)
 k) Vapour pressure < 1.3 hPa at 100 °C - OECD Test Guideline 104
 l) Vapour density 5.26 - (Air = 1.0) Aldrich - C83007 Page 5 of 7
 m) Relative density 0.888 g/cm³ at 25 °C - lit.
 n) Water solubility 0.42 g/l at 25 °C - OECD Test Guideline 105
 o) Partition coefficient: noctanol/water log Pow: ca.2.9 at 25 °C - OECD Test Guideline 117
 p) Auto-ignition temperature 225 °C at 1,013 hPa
 q) Decomposition temperature 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 Relative vapour density 5.26 - (Air = 1.0)

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

No data available

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 6,800 mg/kg(Citral)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg(Citral)

Skin corrosion/irritation

Skin - Rabbit(Citral)

Result: Irritating to skin.

Serious eye damage/eye irritation

Eyes - Rabbit(Citral)

Result: Irritating to eyes.

(OECD Test Guideline 405)

Respiratory or skin sensitisation

- Mouse(Citral)

Result: May cause sensitisation by skin contact.

(OECD Test Guideline 429)

Germ cell mutagenicity

Aldrich - C83007 Page 6 of 7

In vitro mammalian cell gene mutation test(Citral)

Chinese hamster ovary cells

Result: negative

OECD Test Guideline 474(Citral)

Mouse - male and female

Result: negative

Carcinogenicity

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

Reproductive toxicity

No data available(Citral)

Specific target organ toxicity - single exposure

No data available(Citral)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Citral)

Additional Information

Repeated dose toxicity - Rat - female - Oral - Lowest observed adverse effect level - 335 mg/kg(Citral)

Repeated dose toxicity - Rat - male - Oral - Lowest observed adverse effect level - 345 mg/kg(Citral)

RTECS: RG5075000

Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Citral)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish static test LC50 - *Leuciscus idus* (Golden orfe) - 6.78 mg/l - 96 h(Citral)

(DIN 38412)

Toxicity to daphnia and

other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 6.8 mg/l - 48 h(Citral)

Toxicity to algae static test EC50 - *Desmodesmus subspicatus* (*Scenedesmus subspicatus*) -

103.8 mg/l - 72 h(Citral)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d(Citral)

Result: 85 - 95 % - Readily biodegradable

(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Citral)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATION

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

SECTION 15: OTHER REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

SECTION 16: ADDITIONAL INFORMATION For this product a chemical safety assessment was not carried out

This information is provided for documentation purposes only.

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