SAFETY DATA SHEET
In accordance with REACH Regulation EC No.1907/2006

Product: HEXYL CINNAMALDEHYDE (HCA) 1000000031
Version: 1

Section 1. Identification of the substance or the mixture and of the supplier

1.1 Product Identifier
Product identifier: (E)-2-benzylideneoctanal; CAS: 165184-98-5; REACH REG: 01-2119533092-50-0004
Other identifiers: 1000000031 HEXYL CINNAMALDEHYDE (HCA)

1.2 Relevant identified uses of the substance of mixture and uses advised against
Product uses: Ingredient for flavours and fragrances

1.3 Details of the supplier of the safety data sheet
Company name: Eternis Fine Chemicals Ltd.
Company address: 1004, Peninsula Towers, 10 th Floor, Peninsula Corporate Park, G.K. Marg, Lower Parel, Mumbai-400013, India
Contact: Salomi Samuel
E-Mail address: sales@eternis.com
Company phone: +91-22-66513400

1.4 Emergency telephone number

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Classification under Regulation (EC) No 1272/2008
Class and category of danger:
Sensitization - Skin Category 1B
Hazardous to the Aquatic Environment - Acute Hazard Category 1
Hazardous to the Aquatic Environment - Long-term Hazard Category 2
H317, May cause an allergic skin reaction.
H400, Very toxic to aquatic life.
H411, Toxic to aquatic life with long lasting effects.

Classification under Directive 67/548/EEC
Hazard symbols: N, Dangerous for the environment.
Xi, Irritant.

Risk phrases: R38, Irritating to the skin.
R43, May cause sensitisation by skin contact.
R50/53, Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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2.2 Label elements

Classification under Regulation (EC) No 1272/2008

Signal word: Warning

Hazard statements: H317, May cause an allergic skin reaction.
H400, Very toxic to aquatic life.
H411, Toxic to aquatic life with long lasting effects.

M factor: None

Supplemental Information: None

Precautionary statements:
P261, Avoid breathing vapour or dust.
P273, Avoid release to the environment.
P280, Wear protective gloves/eye protection/face protection.
P302/352, IF ON SKIN: Wash with plenty of soap and water.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P391, Collect spillage.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

Section 3. Composition / information on ingredients

3.1 Substances

Product identifier: (E)-2-benzylideneoctanal; CAS: 165184-98-5; REACH REG: 01-2119533092-50-0004

Section 4. First-aid measures

4.1 Description of first aid measures

IF ON SKIN: Wash with plenty of soap and water.
4.2 Most important symptoms and effects, both acute and delayed
May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed
None expected, see Section 4.1 for further information.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable media: Carbon dioxide, Dry chemical, Foam.

5.2 Special hazards arising from the substance or mixture
In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

5.3 Advice for fire fighters:
In case of insufficient ventilation, wear suitable respiratory equipment.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

6.2 Environmental precautions:
Keep away from drains, surface and ground water, and soil.

6.3 Methods and material for containment and cleaning up:
Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

6.4 Reference to other sections:
Also refer to sections 8 and 13.

Section 7. Handling and storage

7.1 Precautions for safe handling:
Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use personal protective equipment as required. Use in accordance with good manufacturing and industrial hygiene practices. Use in areas with adequate ventilation  Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities:
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take
5 precautionary measures against static discharge.

7.3 Specific end use(s):

Ingredient for flavours and fragrances: Use in accordance with good manufacturing and industrial hygiene practices.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits: Not Applicable

8.2 Exposure Controls

Eye / Skin Protection

Wear protective gloves/eye protection/face protection

Respiratory Protection

Under normal conditions of use and where adequate ventilation is available to prevent build up of excessive vapour, this material should not require special engineering controls. However, in conditions of high or prolonged use, or high temperature or other conditions which increase exposure, the following engineering controls can be used to minimise exposure to personnel: a) Increase ventilation of the area with local exhaust ventilation. b) Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. c) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

Please refer to the Exposure Scenario.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Clear pale yellow liquid
Odour: Green floral
Odour threshold: Not determined
pH: Not determined
Melting point/freezing point: 17.6 °C
Initial boiling point and boiling range:
Flash point: 151 °C
Evaporation rate: Not determined
Flammability (solid, gas): Not determined
Upper/lower flammability or explosive limits: Not determined
Vapour pressure: 0.068 Pa @ 25°C
Vapour density: Not determined
Relative density: 0.95 g/cm³ @ 20°C
Solubility(ies): Water Solubility 1.62 mg/l @ 20°C
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Partition coefficient: n-octanol/water: 5.3 log POW
Auto-ignition temperature: Not determined
Decomposition temperature: Not determined
Viscosity: 11 cps
Explosive properties: None
Oxidising properties: Not determined

9.2 Other information: None

Section 10. Stability and reactivity

10.1 Reactivity:

Presents no significant reactivity hazard, by itself or in contact with water.

10.2 Chemical stability:

Good stability under normal storage conditions.

10.3 Possibility of hazardous reactions:

Not expected under normal conditions of use.

10.4 Conditions to avoid:

Avoid extreme heat.

10.5 Incompatible materials:

Avoid contact with strong acids, alkalis or oxidising agents.

10.6 Hazardous decomposition products:

Not expected.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute Toxicity: Based on available data the classification criteria are not met.
Acute Toxicity Oral LD50 (rat) 3100 mg/kg
Acute Toxicity Dermal LD50 (rabbit) >3000 mg/kg
Acute Toxicity Inhalation LC50 (rat) > 2.12 mg/L
Inhalation route vapour

Skin corrosion/irritation: Based on available data the classification criteria are not met.
Skin irritation Rabbit irritating (mild)

Serious eye damage/irritation: Based on available data the classification criteria are not met.
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Version: 1
Eye irritation
Rabbit
not irritating

Respiratory or skin sensitisation:
Sensitization - Skin Category 1B
Skin sensitisation
Local Lymph Node Assay sensitising

Germ cell mutagenicity:
Based on available data the classification criteria are not met.
Mutagenicity
Ames test negative

Carcinogenicity:
No data available

Reproductive toxicity:
Based on available data the classification criteria are not met.

STOT-single exposure:
Based on available data the classification criteria are not met.

STOT-repeated exposure:
Based on available data the classification criteria are not met.

Aspiration hazard:
No data available

Refer to Section 2 for additional information.

Section 12. Ecological information

12.1 Toxicity
Aquatic toxicity:
Hazardous to the Aquatic Environment - Acute Hazard Category 1
Hazardous to the Aquatic Environment - Long-term Hazard Category 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Organism</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 (48 hrs)</td>
<td>Daphnia magna</td>
<td>&gt; 0.36 - &lt; 0.59 mg/L</td>
</tr>
<tr>
<td>EC50 (72 hrs) (static)</td>
<td>Desmodesmus subspicatus</td>
<td>&gt; 0.065 mg/L</td>
</tr>
<tr>
<td>LC50 (96 hrs)</td>
<td>Pimephales Promelas (Fathead Minnow)</td>
<td>1.7 mg/L</td>
</tr>
<tr>
<td>NOEC (21 d)</td>
<td>Daphnia magna</td>
<td>63 µg/L</td>
</tr>
<tr>
<td>EC10 (21 d)</td>
<td>Daphnia magna</td>
<td>69 µg/L</td>
</tr>
<tr>
<td>NOEC (28 d)</td>
<td>Lumbriculus variegates</td>
<td>32 mg/kg</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Biodegradation: Readily biodegradable

12.3 Bioaccumulative potential
Partition coefficient n-octanol/water (log Kow): Calculated 5.3
Bioconcentration factor (BCF): Not available
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12.4 Mobility in soil
Adsorption coefficient:
<table>
<thead>
<tr>
<th>Log Koc</th>
<th>Measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koc</td>
<td>Measured</td>
</tr>
</tbody>
</table>

12.5 Results of PBT and vPvB assessment
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects
Not applicable

12.7 Additional information
None available

Section 13. Disposal considerations

13.1 Waste treatment methods:
Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information

14.1 UN number: UN3082
14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((E)-2-benzylideneoctanal)
14.3 Transport hazard class(es): 9
    Sub Risk:
14.4. Packing Group: III
14.5 Environmental hazards: Environmentally hazardous for transport
14.6 Special precautions for user: None additional
14.5 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
    Code: Not classified

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
None additional

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has been carried out. Refer to the Annex for further information on Exposure Scenarios
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Section 16. Other information

Key to revisions:
Not applicable

Key to abbreviations:
Not applicable

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.