1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING

1.1 Product Identifier

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Grapefruit Oil Organic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Definition</td>
<td>Citrus Paradisi Peel Oil is the volatile oil expressed from the peel of the Grapefruit, Citrus paradisi, Rutaceae.</td>
</tr>
<tr>
<td>INCI Name</td>
<td>Citrus Paradisi Peel Oil</td>
</tr>
<tr>
<td>Synonyms &amp; Trade Names</td>
<td>-</td>
</tr>
<tr>
<td>CAS-No</td>
<td>8016-20-4</td>
</tr>
<tr>
<td>EC No.</td>
<td>N/A</td>
</tr>
<tr>
<td>EINECS No.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1.2 Relative identified uses of the substance or mixture and uses advised against

Uses advised against: not for personal use in this form or concentration.

1.3 Details of the supplier of the safety data sheet

NHR Organic Oils, 24 Chatham Place, Brighton, BN1 3TN, UK

1.4 Emergency Tel. No. 0845 310 8066

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The Full Text for all Hazard Statements displayed in Section 16.

Classification (EC 1272/2008)

- Flammable Liquid, Hazard Category 3 - H226
- Skin Corrosion / Irritation Category 2 - H315
- Sensitization - Skin Category 1 - H317
- Aspiration Hazard Category 1 - H304
- Hazardous to the Aquatic Environment – Aquatic Chronic Category 1 - H410

2.2 Label Elements

Label in accordance with (EC) No 1272/2008

GHS02  GHS07  GHS08  GHS09

Signal Word  Danger.
Contains  Limonene, Myrcene,
Hazard Statements  H226, Flammable liquid and vapour.
H304, May be fatal if swallowed and enters airways.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H410, Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P210, Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P241, Use explosion-proof electrical, ventilating and lighting equipment.
P261, Avoid breathing vapour or dust.
P273, Avoid release to the environment.
P280, Wear protective gloves/eye protection/face protection.
P301/310, IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303/361/353, IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P331, Do not induce vomiting.

Supplementary Precautionary Statements

P405, Store locked up.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

2.3 Other Hazards

PBT or vPvB according to Annex XIII: No.
Adverse physio-chemical properties: Combustible but should not self-ignite.
Adverse effects on human health: Skin contact may cause irritation/sensitisation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

≤ 97.0% Limonene CAS-No: 5989-27-5; EC No.: 227-813-5

≤ 2.0% Myrcene CAS No: 123-35-3 ; EC No: 204-622-5
Classification (EC 1272/2008) Flam. Liq. 3 - H226, Asp. Tox. 1 - H304, Aquatic Chronic 3 - H412

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Remove from exposure area to fresh air. Obtain medical advice if irritation persists.
Ingestion: Wash mouth out with water and obtain medical advice immediately. Do not induce vomiting.
Skin Contact: Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical advice if irritation persists or there is any sign of tissue damage.
Eye Contact: Flush with plenty of water and seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Inhalation: can cause slight headache.
Contact: can cause bloodshot eyes. Can cause slight skin rash.
Acute and delayed effects: No post-disorder effects are reported.

4.3 Indication of any immediate medical attention and special treatment needed

see Section 4.1 for further information.
Eye wash fountain and safety shower should be available in the work area.

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Small fire: CO2, Dry powder, Foam. Spray to base of flames
Large fire: use water spray or fog. Cool containing vessels with water to prevent pressure build up, auto-ignition or explosion. Unsuitable extinguishing media: pressurised water jet.

5.2 Special hazards arising from the product

Vapours may form explosive mixture with air. In case of fire, the following can be released: Carbon monoxide, carbon dioxide, smoke, soot.

5.3 Advice for firefighters

Standard procedure for chemical fires: spray extinguishing media to base of flames. Use adequate respiratory protection to avoid inhalation of vapours. Wear suitable protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

In an emergency (i.e. unintentional important release of the product in an enclosed space) respiratory protection must be worn. (Gas filter A, colour code brown: consider the maximum duration for wear). Use insulating device for respiratory protection with an independent air supply in circumstances which are unclear. Use adequate protections that are solvent resistant: security shoes, bodysuit, gloves, protective goggles. Remove any ignition source and ensure adequate ventilation in working areas following accidental releases.

6.2 Environmental Precautions

Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up.

Remove ignition sources. Ensure adequate ventilation. Absorb with inert, non-combustible, inorganic absorbent material, sweep up and remove to an approved disposal container.

6.4 Reference to other sections

See sections 4, 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Apply good manufacturing practice & industrial hygiene practices, ensuring proper workplace ventilation. Wear adequate protection to avoid contact with skin and eyes. Ensure adequate ventilation at all times. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Do not ingest. Keep away from heat, sparks and open flame.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed original container (stainless steel drum, preferable under inert atmosphere. E.g. nitrogen), in a cool, dry & ventilated area away from heat sources. Protect from light. Take precautionary measures against static discharge. Take Note: the container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long term warehousing.

7.3 Specific end use(s)

Use as an odour agent / flavouring agent: Use in accordance with good manufacturing and industrial hygiene practices.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No additional data available.

8.2 Exposure controls

Protective Equipment
<table>
<thead>
<tr>
<th>Process Conditions</th>
<th>Provide eyewash station.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Measures</td>
<td>Provide adequate ventilation where appropriate, use closed system to transfer and process this material. If appropriate, isolate mixing rooms and other areas where this material is used or openly handles. Maintain these areas under negative air pressure relative to the rest of the plant.</td>
</tr>
<tr>
<td>Respiratory Equipment</td>
<td>Not necessary in adequate ventilation of working area. Avoid inhalation of vapours.</td>
</tr>
<tr>
<td>Hand Protection</td>
<td>Avoid all skin contact. Wear chemical resistant gloves tested to EN374.</td>
</tr>
<tr>
<td>Eye Protection</td>
<td>Avoid contact with eyes. Wear approved safety goggles with built in frames tested to EN166.</td>
</tr>
<tr>
<td>Other Protection</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Hygiene Measures</td>
<td>Good personal hygiene practices are always advisable, especially when working with chemicals / oils. Keep away from foodstuffs, beverages and feed.</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>Avoid inhalation and contact with skin and eyes.</td>
</tr>
<tr>
<td>Skin Protection</td>
<td>Wear protective clothing to avoid all skin contact.</td>
</tr>
<tr>
<td>Environmental Exposure Controls</td>
<td>Avoid discharging into drainage water. Only eliminate by authorised companies.</td>
</tr>
</tbody>
</table>

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid, yellow.</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow.</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic – citrus, grapefruit.</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.836 – 0.846 @ 20°C</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>~47.0</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.468 to 1.478 @ 20°C</td>
</tr>
<tr>
<td>Melting Point (°C)</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Boiling Point (°C)</td>
<td>~170.0 ± 10.0 @ 1029 hPa</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>186.4 Pa @25°C</td>
</tr>
<tr>
<td>Solubility in Water @20°C</td>
<td>Insoluble in water. Soluble in alcohol and other oils.</td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td>~ 235.0</td>
</tr>
</tbody>
</table>

#### 9.2 Other information

No additional data available.

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

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

#### 10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

#### 10.3 Possible hazardous reactions

Not expected under normal temperature conditions and recommended use.

#### 10.4 Conditions to Avoid

Avoid exposure to heat, sparks and open flames.

#### 10.5 Incompatible materials
Avoid contact with strong acids, alkalis and oxidising agents.

10.6 Hazardous Decomposition Products

No known hazardous decomposition products under normal temperature conditions and recommended use.

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>LD50: &gt; 5.0 g/kg (source RIFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion / irritation</td>
<td>Causes skin irritation (H315).</td>
</tr>
<tr>
<td>Serious eye damage / irritation</td>
<td>Not classified as irritating to the eye. (source RIFM).</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>May cause an allergic skin reaction (H317).</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>May be fatal if swallowed and enters airways (H304).</td>
</tr>
<tr>
<td>Photo-toxicity</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Other Information</td>
<td>No additional data available.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic life: Very toxic to aquatic life with long lasting effects. (H410).
Algae/aquatic plants: EC50: 14.0 mg/l (48h) calculated value (source RIFM).
Fish/aquatic vertebrates: no additional data available.
PNECs: no additional data available.

12.2 Persistence & degradability

This material is considered readily biodegradable, therefore does not fulfil the criteria for persistence.

12.3 Bioaccumulation Potential

Very toxic to aquatic life with long lasting effects. (H410).

12.4 Mobility in soil

This material is considered readily biodegradable, therefore simulation tests in surface water, sediment and soil are not required in accordance with column 2 of REACH Annex IX.

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

Do not discharge into the environment especially not into waterways, sewers and the sea.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not release into the environment. Collect waste into suitable containers and contact hazardous chemical disposal company.

14. TRANSPORT INFORMATION

14.1 UN number

<table>
<thead>
<tr>
<th>UN No. Road</th>
<th>UN 1169</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No. SEA</td>
<td>UN 1169</td>
</tr>
</tbody>
</table>
### 14.2 UN proper shipping name
Extracts, Aromatic, Liquid.

### 14.3 Transport hazard class(es)
<table>
<thead>
<tr>
<th>ADR/RID/ADN Class:</th>
<th>3 Flammable Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG Class:</td>
<td>3 Flammable Liquid.</td>
</tr>
<tr>
<td>ICAO Class/Division:</td>
<td>3 Flammable Liquid.</td>
</tr>
</tbody>
</table>

### 14.4 Packing group
| ADR/RID/ADN Packing group     | III                  |
| IMDG Packing group             | III                  |

### 14.5 Environmental hazards
Environmentally Hazardous Substance/Marine Pollutant.

### 14.6 Special precautions for user
This product contains constituents flammable & dangerous for the environment. In case of pouring out, make sure to label new package accordingly, reproducing original label with relevant symbols.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code
No additional data available.

## 15. REGULATORY INFORMATION

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

- **Statutory Instruments**
  - Guidance Notes
  - Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

- **EU Legislation**

### 15.2 Chemical safety assessment
No additional information available.
16. OTHER INFORMATION

| Hazard and/or Precautionary Statements in Full | H226, Flammable liquid and vapour.  
|                                               | H304, May be fatal if swallowed and enters airways.  
|                                               | H315, Causes skin irritation.  
|                                               | H317, May cause an allergic skin reaction.  
|                                               | H410, Very toxic to aquatic life with long lasting effects.  
| Other Information | Complies with REACH guidance for SDS as circulated by ECHA 2011.  
| Revision Date | 19/05/2016  
| Reason for revision | Update to new format  
| Rev No/Repl, SDS Generated | 02  

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