



NHR ORGANIC OILS
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Safety Data Sheet
Organic Bitter Orange Essential Oil
(Citrus aurantium var. amara)

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

| | | | | | |
|--|------------|--|-----------|--------|-----------|
| 1.1 Product Identifier | | | | | |
| Product Name | | Organic Orange Bitter Oil | | | |
| Biological Definition | | "Bitter Orange Oil". Citrus Aurantium Peel Oil Expressed is an essential oil expressed from the fresh epicarps of the Sour Orange, Citrus aurantium, Rutaceae. | | | |
| INCI Name | | Citrus Aurantium Peel Oil Expressed | | | |
| CAS | 72968-50-4 | EC | 277-143-2 | EINECS | 277-143-2 |
| 1.2 Relative identified uses of the substance or mixture and uses advised against | | | | | |
| No additional data | | | | | |
| 1.3 Details of the supplier of the safety data sheet | | | | | |
| NHR Organic Oils 24 Chatham Place Brighton East Sussex BN1 3TN UK | | | | | |
| 1.4 Emergency Tel. No. | | + 44 (0) 1273 746 505 | | | |

02. HAZARDS IDENTIFICATION

| | |
|---|--|
| 2.1 Classification of the substance or mixture | |
| No additional data | |
| Classification (EC 1272/2008) | |
| Physical hazards: - Flam. Liq. 3 - H226 Health hazards: | |

- Skin Irrit. 2 - H315
 - Skin Sens. 1 - H317
 - Asp. Tox. 1 - H304
- Environmental hazards:
- Aquatic Chronic 2 - H411

2.2 Label Elements

Label in accordance with (EC) No 1272/2008



Signal Word

Danger

Contains

- D-Limonene
- Myrcene
- Pinenes

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.
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements

None

Supplementary Statements

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 - Keep container tightly closed.
 P240 - Ground/bond container and receiving equipment.
 P241 - Use explosion-proof electrical equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P261 - Avoid breathing vapour/spray.
 P264 - Wash contaminated skin thoroughly after handling.
 P321 - Specific treatment (see medical advice on this label).
 P370/378 - In case of fire - Use foam, carbon dioxide, dry powder or water fog for extinction.

P301/310 - IF SWALLOWED - Immediately call a POISON CENTRE or doctor/physician.
P302/352 - IF ON SKIN - Wash with plenty of soap and water.
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.
P332/313 - If skin irritation occurs - Get medical advice/attention.
P333/313 - If skin irritation or rash occurs - Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P403/235 Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents in accordance with local, state or national legislation.

2.3 Other Hazards

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|-------------------------------------|--------------------|
| PBT or vPvB according to Annex XIII | No additional data |
| Adverse physio-chemical properties | No additional data |
| Adverse effects on human health | No additional data |

03. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Composition

≤99.0% d-Limonene

CAS: 5989-27-5

Classification (EC 1272/2008)

- Flam. Liq. 3 - H226
- Asp. Tox. 1 - H304
- Skin Irrit. 2 - H315
- Skin Sens. 1 - H317
- Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410

≤3.0% Myrcene (7-methyl-3-methylenoocta-1,6-diene)

CAS: 123-35-3

Classification (EC 1272/2008)

- Flam. Liq. 3 - H226
- Asp. Tox. 1 - H304
- Skin Irrit. 2 - H315
- Eye Irrit. 2 - H319

≤1.50% alpha- Pinene

CAS: 80-56-8

Classification (EC 1272/2008)

- Flam. Liq. 3 - H226
- Acute Tox. 4 - H302

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| <ul style="list-style-type: none"> - Asp. Tox. 1 - H304 - Skin Irrit. 2 - H315 - Skin Sens. 1 - H317 - Aquatic Acute 1 - H400 - Aquatic Chronic 1 - H410 |
| <p>≤1.00% beta-Pinene CAS: 127-91-3 Classification (EC 1272/2008)</p> <ul style="list-style-type: none"> - Flam. Liq. 3 - H226 - Asp. Tox. 1 - H304 - Skin Irrit. 2 - H315 - Skin Sens. 1 - H317 - Aquatic Acute 1 - H400 - Aquatic Chronic 1 - H410 |
| <p>≤1.00% Linalool CAS: 78-70-6 Classification (EC 1272/2008)</p> <ul style="list-style-type: none"> - Skin Irrit. 2 - H315 - Skin Sens. 1B - H317 - Eye Irrit. 2 - H319 |
| <p>≤1.00% Citral CAS: 5392-40-5 Classification (EC 1272/2008)</p> <ul style="list-style-type: none"> - Skin Irrit. 2 - H315 - Skin Sens. 1B - H317 - Eye Irrit. 2 - H319 |
| <p>≤1.00% Geraniol CAS: 106-24-1 Classification (EC 1272/2008)</p> <ul style="list-style-type: none"> - Skin Irrit. 2 - H315 - Skin Sens. 1A - H317 - Eye Dam. 1 - H318 |

04. FIRST AID MEASURES

| 4.1 Description of first aid measures | |
|--|---|
| Inhalation | Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Remove immediately from source of exposure and remain in a position which is comfortable for breathing. Seek medical attention. |
| Ingestion | Do NOT induce vomiting. Ingestion may cause nausea and vomiting. Immediately rinse mouth and provide fresh air. Seek medical attention. |
| Skin Contact | Remove contaminated clothing and wash before reuse. Wash skin thoroughly with soap and water. If discomfort occurs/continues, seek medical attention. |

| | |
|--|---|
| Eye Contact | Rinse eyes with clean water for a minimum of fifteen minutes. If safe to do so, remove to contact lenses and continue to rinse. Remove any contact lenses and open eyes wide apart, continue rinsing. Seek medical attention. |
| 4.2 Most important symptoms and effects, both acute and delayed | |
| <ul style="list-style-type: none"> - May be fatal if swallowed and enters airways. - Causes skin irritation. - May cause an allergic skin reaction. | |
| 4.3 Indication of any immediate medical attention and special treatment needed | |
| Treat symptomatically. | |

05. FIRE-FIGHTING MEASURES

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| 5.1 Extinguishing Media | |
| Carbon Dioxide, Foam, Dry Chemical Powder. Do NOT use water. | |
| 5.2 Special hazards arising from the product | |
| In the event of fire this product can generate oxides of carbon and other toxic gases. A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health. Do not breathe in smoke. | |
| 5.3 Advice for firefighters | |
| Wear self-contained respiratory equipment and appropriate protective clothing at all times. Do not inhale any gases or fumes which may be generated. Containers in close proximity to fire should be removed to a safe distance and the exterior of the container cooled with water. | |

06. ACCIDENTAL RELEASE MEASURES

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| 6.1 Personal precautions, protective equipment and emergency procedures | |
| Wear protective clothing as recommended at all times. Handle the product using protective gloves resistant to the chemicals exposed. Avoid contact with skin and inhalation of its vapours. Maintain adequate ventilation in the working area after spilling. | |
| 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. | |
| 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 outdoors. Avoid open flames or courses of | |

ignition. Ventilate area and wash spill site after material pickup is complete. Dispose of in accordance with current laws and regulations.

6.4 Reference to other sections

Section 13

07. HANDLING AND STORAGE

7.1 Precautions for safe handling

Adhere to all good health, safety and hygiene practices. If handling large/heavy packages or drums, ensure the use of suitable mechanical equipment at all times. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only in area provided with adequate ventilation. Do not eat, drink or smoke whilst handling this product.

7.2 Conditions for safe storage, including any incompatibilities

Store In a cool, dry, well-ventilated area. Protect from freezing, heat and light including sunlight. Protect from all potential sources of ignition. Keep all containers tightly sealed when not in use. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

7.3 Specific end use(s)

No additional data

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No additional data

8.2 Exposure controls

Protective Equipment



Process Conditions

No additional data

| | |
|---------------------------------|--|
| Engineering Measures | Install sufficient ventilation across all areas. Install readily available eyewash stations and safety showers. |
| Respiratory Equipment | 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: <ul style="list-style-type: none"> - Increase ventilation of the area with local exhaust ventilation. - Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. - Use closed systems for transferring and processing this material. |
| Hand Protection | Wear appropriate protective chemically resistant gloves at all times which comply with EN374. |
| Eye Protection | Wear appropriate protective safety goggles which comply with EN166 at all times. |
| Other Protection | No additional data |
| Hygiene Measures | Good hygiene practices are always recommended, especially when handling oils, chemicals or any other similar type of material. |
| Personal Protection | No additional data |
| Skin Protection | Wear appropriate protective chemically resistant clothing at all times to prevent any potential skin contact with this product. |
| Environmental Exposure Controls | Do not allow entry into drains, water courses or onto the ground. |

09. PHYSICAL AND CHEMICAL PROPERTIES

| 9.1 Information on basic physical and chemical properties | |
|--|---------------------------------------|
| Appearance | Liquid |
| Colour | Orange – Brownish Yellow – Dark Green |
| Odour | Characteristic |
| Relative Density | ~0.850 @ 20°C |
| Flash Point (°C) | ~45.00 |
| Refractive Index | ~1.474 @ 20°C |
| Melting Point (°C) | No additional data |

| | |
|--------------------------------|--------------------|
| Boiling Point (°C) | No additional data |
| Vapour Pressure | No additional data |
| Solubility in Water @20°C | No additional data |
| Auto-ignition temperature (°C) | No additional data |
| 9.2 Other information | |
| No additional data | |

10. STABILITY AND REACTIVITY

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|--|--|
| 10.1 Reactivity | |
| Presents no significant reactivity hazard, by itself or in contact with water. | |
| 10.2 Chemical stability | |
| Expected to remain stable under recommended storage conditions. | |
| 10.3 Possible hazardous reactions | |
| No additional data | |
| 10.4 Conditions to Avoid | |
| Avoid heat, flames and other sources of ignition. | |
| 10.5 Incompatible materials | |
| Strong Oxidising Agents. Strong Acids. Strong Alkalis. | |
| 10.6 Hazardous Decomposition Products | |
| No additional data | |

11. TOXOLOGICAL INFORMATION

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|--|---|
| 11.1 Information on toxicological effects | |
| Acute Toxicity | Based on available data the classification criteria are not met. Acute Toxicity Oral >5000 (Literature) Acute Toxicity Dermal Not Applicable Acute Toxicity Inhalation Not Available |
| Skin corrosion / irritation | Skin Corrosion/Irritation - Category 2 |
| Serious eye damage / irritation | See Section 16 |

| | |
|--|--|
| Respiratory or skin sensitisation | Sensitization - Skin Category 1 |
| Germ Cell Mutagenicity | Based on available data the classification criteria are not met. |
| Carcinogenicity | Based on available data the classification criteria are not met. |
| 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 | Aspiration Hazard - Category 1 |
| Photo-toxicity | No additional data |
| Other Information | No additional data |

12. ECOLOGICAL INFORMATION



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| 12.1 Toxicity |
| Toxic to aquatic life with long lasting effects. See Section 16 |
| 12.2 Persistence & degradability |
| No additional data |
| 12.3 Bioaccumulation Potential |
| No additional data |
| 12.4 Mobility in soil |
| No additional data |
| 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 allow product to enter streams, sewers or other waterways. |

13. DISPOSAL CONSIDERATIONS

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| 13.1 Waste treatment methods |
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Always dispose of this product in accordance with local and national regulations. Do not allow entry into drains or waterways. Do not contaminate the ground or water with waste. Do not dispose of waste into the environment. Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals. Recycling is always preferable to disposal. When containers have been fully emptied, ensure the labelling remains.

14. TRANSPORT INFORMATION

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|---|------|
| 14.1 UN number | |
| UN No. Road | 1169 |
| UN No. SEA | 1169 |
| UN No. AIR | 1169 |
| 14.2 UN proper shipping name | |
| EXTRACTS, AROMATIC, LIQUID | |
| 14.3 Transport hazard class(es) | |
| 3 | |
|  | |
| 14.4 Packing group | |
| III | |
| 14.5 Environmental hazards | |
| Environmentally Hazardous Substance/Marine Pollutant | |
|  | |
| 14.6 Special precautions for user | |
| Details throughout document: 6, 7, 8 | |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code | |
| No additional data | |

15. REGULATORY INFORMATION

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| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture |
| The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I. 2009 No. 716). Workplace Exposure Limits EH40. CHIP for everyone HSG (108). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. |
| 15.2 Chemical safety assessment |
| No additional data |

16. OTHER INFORMATION

| | |
|----------------------------------|--|
| Hazard Statements in Full | H226 - Flammable liquid and vapour. H302 - Harmful if swallowed. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H319 - Causes serious eye irritation. H410 - Very toxic to aquatic life with long lasting effects. H411 - Toxic to aquatic life with long lasting effects. |
| Additional Data | The CLP additivity calculation classifies product as Eye Irrit. 2, H319 - Causes serious eye irritation. However, based on REACH registration data the product does not have to be classified as an eye irritant. REACH registration - The toxicity for aquatic organisms was assessed on migrated information: read across based on groupings of substances and concluded that product should be classified as Aquatic Chronic 2: H411- Toxic to aquatic life with long lasting effects. |
| Revision Date | 22/03/2020 |
| Rev No | 1 |

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