

Certificate of Analysis

| PRODUCT DETAILS | | | | |
|-------------------------|---|---|--|--|
| Product Name | FENNEL OIL SWEET | | | |
| Product Code | OEFENNSWEE | OEFENNSWEE | | |
| INCI Name | Foeniculum vulgare Mill. Var. dulce | | | |
| Batch Number | 4376112 | | | |
| Best Before End | October 2022 | | | |
| Manufacturing Process | Obtained by steam distillation from the (Umbelliferae). | e fruits of Foeniculum vulgare Mill. Var. dulce | | |
| Identification | CAS No: 84455-29-8 | | | |
| | Alternative Cas: 8006-84-6 | | | |
| | EINECS No: 282-892-3 | | | |
| | | FEMA: 2483 | | |
| | | | | |
| PHYSICAL AND CHEMICAI | L CHARACTERISTIC | | | |
| | SPECIFICATION RANGE | RESULTS | | |
| Appearance | Liquid | Conforms | | |
| Colour | Colourless to light yellow | Conforms | | |
| Odour | Characteristic | Conforms | | |
| Relative Density @ 20°c | 0.950 - 0.985 | 0.971 | | |
| Refractive Index @ 20°c | 1.520 - 1.560 | 1.535 | | |
| Flash Point | >65°c | Conforms | | |
| Optical Rotation | +4.0 to +25.0 | 13.77 | | |
| STORAGE AND SHELF LIFE | | | | |
| Storage | Store in tightly closed container wit place. | h minimum headspace in a cool, dark and dry | | |

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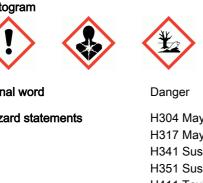


SAFETY DATA SHEET **FENNEL SWEET**

| SECTION 1: Identification of the substance/mixture and of the company/undertaking | | |
|---|--|--|
| 1.1. Product identifier | | |
| Product name | FENNEL SWEET | |
| Product number | ORFENSWEE | |
| Synonyms; trade names | Foeniculum vulgare oil | |
| CAS number | 8006-84-6 | |
| Alternative Cas Number | | |
| FEMA No: | 2482 | |
| 1.2. Relevant identified uses | of the substance or mixture and uses advised against | |
| Identified uses | Industrial, only for professional use | |
| 1.3. Details of the supplier of | the safety data sheet | |
| Supplier | MADAR Corporation Limited | |
| | 19-20 Sandleheath Industrial Estate | |
| | Fordingbridge | |
| | Hampshire | |
| | SP6 1PA | |
| Telephone | 01425 655555 | |
| Approved Sellers | Mystic Moments, New Directions, World of Moulds | |
| 1.4. Emergency telephone number | | |
| SECTION 2: Hazards identification | | |
| | | |

| 2.1. Classification of the substance or mixture | | | |
|---|--|--|--|
| Classification (EC 1272/2008) | | | |
| Physical hazards | Not Classified | | |
| Health hazards | Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351 Asp. Tox. 1 - H304 | | |
| Environmental hazards | Aquatic Chronic 2 - H411 | | |
| | | | |
| Human health | Corrosive to skin and eyes. May be fatal if swallowed and enters airways. The liquid may be irritating to skin. Suspected of causing cancer. Suspected of causing genetic defects. | | |
| Environmental | The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. | | |
| 2.2. Label elements | | | |

| P | icto | a | ra | m |
|---|------|----------|----|---|
| | | <u>'</u> | α | |



| Signal word | Danger |
|---|---|
| Hazard statements | H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H411 Toxic to aquatic life with long lasting effects. |
| Precautionary statements | P202 Do not handle until all safety precautions have been read and understood. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P501 Dispose of contents/ container in accordance with national regulations. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P310 Immediately call a POISON CENTER/ doctor. |
| Contains | trans-anethole, (R)-p-mentha-1,8-diene, Estragole, Alpha Pinene |
| Supplementary precautionary statements | P201 Obtain special instructions before use. P261 Avoid breathing vapour/ spray. P272 Contaminated work clothing should not be allowed out of the workplace. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P302+P352 IF ON SKIN: Wash with plenty of water. P308+P313 IF exposed or concerned: Get medical advice/ attention. P321 Specific treatment (see medical advice on this label). P331 Do NOT induce vomiting. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. P405 Store locked up. |

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Molecular Weight

3.2. Mixtures

trans-anethole

CAS number: 4180-23-8

EC number: 224-052-0

Classification

Skin Sens. 1 - H317

60-100%

Skin contact

FENNEL SWEET

| (R)-p-mentha-1,8-diene | | 3-8% |
|---------------------------------------|---|-------|
| CAS number: 5989-27-5 | EC number: 227-813-5 | |
| M factor (Acute) = 1 | M factor (Chronic) = 1 | |
| Classification | | |
| Flam. Liq. 3 - H226 | | |
| Skin Irrit. 2 - H315 | | |
| Skin Sens. 1 - H317 | | |
| Asp. Tox. 1 - H304 | | |
| Aquatic Acute 1 - H400 | | |
| Aquatic Chronic 1 - H410 | | |
| Estragole | | 1-5% |
| CAS number: 140-67-0 | EC number: 205-427-8 | |
| | | |
| Classification Acute Tox. 4 - H302 | | |
| Skin Sens. 1 - H317 | | |
| Muta. 2 - H341 | | |
| Carc. 2 - H351 | | |
| • | | 4 504 |
| p-Cymene | | 1-5% |
| CAS number: 99-87-6 | EC number: 202-796-7 | |
| Classification | | |
| Flam. Liq. 3 - H226 | | |
| Asp. Tox. 1 - H304 | | |
| Aquatic Chronic 2 - H411 | | |
| Alpha Pinene | | 1-7% |
| CAS number: 80-56-8 | EC number: 201-291-9 | |
| Classification | | |
| Flam. Liq. 3 - H226 | | |
| Skin Irrit. 2 - H315 | | |
| Skin Sens. 1 - H317 | | |
| Asp. Tox. 1 - H304 | | |
| The Full Text for all R-Phras | es and Hazard Statements are Displayed in Section 16. | |
| SECTION 4: First aid measu | ires | |
| 4.1. Description of first aid m | ieasures | |
| nhalation | Move affected person to fresh air at once. Get medical attention if any discomfort contin | iues. |
| Ingestion | Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention immediately. | |
| Pkin contact | Person contaminated elething immediately and weak elvin with even and water | |

Remove contaminated clothing immediately and wash skin with soap and water.

| Eye contact | Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product. | |
|---|--|--|
| 4.2. Most important symptoms | and effects, both acute and delayed | |
| | te medical attention and special treatment needed | |
| Notes for the doctor | Treat symptomatically. | |
| SECTION 5: Firefighting meas | sures | |
| 5.1. Extinguishing media | | |
| Suitable extinguishing media | Use as appropriate carbon dixoide (CO2), dry chemical or foam | |
| Unsuitable extinguishing media | Do not use water, if avoidable. | |
| 5.2. Special hazards arising from | om the substance or mixture | |
| Specific hazards | In case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO2), smoke, soot. | |
| 5.3. Advice for firefighters | | |
| Protective actions during firefighting | Avoid breathing fire gases or vapours. Containers close to fire should be removed or cooled with water. | |
| Special protective equipment for firefighters | Use protective equipment appropriate for surrounding materials. | |
| SECTION 6: Accidental release | e measures | |
| 6.1. Personal precautions, pro | tective equipment and emergency procedures | |
| Personal precautions | Ensure adequate ventilation of the working area, evacuate personnel to safe area, wear suitable protective equipment. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin and eyes. Avoid inhalation of vapours. | |
| 6.2. Environmental precaution | S | |
| Environmental precautions | Do not discharge into drains or watercourses or onto the ground. | |
| 6.3. Methods and material for | containment and cleaning up | |
| Methods for cleaning up | Absorb with liquid binding material (e.g sand, diatomaceous earth, acid or universal binding agents). Collect in closed and suitable containers for disposal. | |
| 6.4. Reference to other section | ns | |
| Reference to other sections | For waste disposal, see Section 13. | |
| SECTION 7: Handling and sto | rage | |
| 7.1. Precautions for safe hand | ling | |
| Usage precautions | Avoid contact with skin and eyes. Do not breathe vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only in well-ventilated areas. | |
| 7.2. Conditions for safe storage, including any incompatibilities | | |
| Storage precautions | Store in tightly-closed, original container in a dry, cool and well-ventilated place. | |
| 7.3. Specific end use(s) | | |
| BiOrigi | ns, 19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK Tel: 01425 655555 Email: technical@madarcorporation.co.uk Page 4 of 8 | |
| | | |

SECTION 8: Exposure Controls/personal protection

| 8.1. Control parameters | | |
|-------------------------|--|--|
| | (R)-p-mentha-1,8-diene (CAS: 5989-27-5) | |
| DNEL | Workers - Inhalation; Long term systemic effects: 33.3 mg/m ³ General population - Oral; Long term systemic effects: 4.76 mg/kg | |
| PNEC | - STP; 1.8 mg/l - Soil; 0.262 mg/kg - Fresh water; 0.0054 mg/l - Marine water; 0.00054 mg/l - Sediment (Freshwater); 1.32 mg/kg - Sediment (Marinewater); 0.13 mg/kg | |
| | Alpha Pinene (CAS: 80-56-8) | |
| DNEL | Workers - Inhalation; Long term systemic effects: 5.98 mg/m³ General population - Oral; Long term systemic effects: 0.31 mg/kg General population - Inhalation; Long term systemic effects: 1.06 mg/m³ | |
| PNEC | - STP; 3.26 mg/l - Soil; 0.539 mg/kg - Fresh water; 0.004 mg/l - Marine water; 0.0004 mg/l - Sediment (Freshwater); 1.033 mg/kg - Sediment (Marinewater); 0.103 mg/kg | |

8.2. Exposure controls

Protective equipment





| Appropriate engineering controls | Provide adequate ventilation. |
|-----------------------------------|--|
| Personal protection | Use personal protection according to Directive 89/686/EEC |
| Eye/face protection | Approved safety goggles. |
| Hand protection | Chemical resistant gloves (PVC) |
| Other skin and body protection | Wear protective clothing. |
| Hygiene measures | Good personal hygiene procedures should be implemented. |
| Respiratory protection | Generally unnecessary in a well ventilated area. If ventilation is insufficient, respiratory protection must be worn. |
| Environmental exposure controls | Avoid discharging into drains. |

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| Colour | Colourless to pale yellow. | |
|--|---|--|
| Odour | Characteristic. | |
| Flash point | 62°C | |
| Relative density | 0.950 - 0.970 @ 20°C | |
| Optical rotation | | |
| 9.2. Other information | | |
| Refractive index | 1.530 - 1.550 @ 20°C | |
| SECTION 10: Stability and rea | activity | |
| 10.1. Reactivity | | |
| Reactivity | No other information known. | |
| 10.2. Chemical stability | | |
| Stability | Stable under normal conditions. | |
| 10.3. Possibility of hazardous | reactions | |
| | | |
| Possibility of hazardous reactions | None known. | |
| 10.4. Conditions to avoid | | |
| Conditions to avoid | Temperatures above room temperature will allow the transfer from liquid to vapour phase and the formation of explosive atmosphere. Storing the product in open containers will benefit the formation of peroxides and derogate the quality. | |
| 10.5. Incompatible materials | | |
| Materials to avoid | Strong acids. Strong alkalis. Strong oxidising agents. | |
| 10.6. Hazardous decomposition | on products | |
| Hazardous decomposition products | No known hazardous decomposition products. | |
| SECTION 11: Toxicological in | formation | |
| 11.1. Information on toxicolog | ical effects | |
| Acute toxicity - oral | | |
| ATE oral (mg/kg) | 16,666.67 | |
| SECTION 12: Ecological Information | | |
| Ecotoxicity | The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. | |
| 12.1. Toxicity | | |
| 12.2. Persistence and degradability | | |
| 12.3. Bioaccumulative potential | | |
| 12.4. Mobility in soil | | |
| 12.5. Results of PBT and vPvB assessment | | |
| 12.6. Other adverse effects | | |
| SECTION 13: Disposal considerations | | |
| 13.1. Waste treatment method BiOriai | ds ns, 19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK | |
| Dioligi | ,, ,, , , , , , , , , , , , | |

| General information | Dispose of in compliance with all local and national regulations. | | | |
|-----------------------------------|---|--|--|--|
| SECTION 14: Transport inform | SECTION 14: Transport information | | | |
| 14.1. UN number | | | | |
| UN No. (ADR/RID) | 3082 | | | |
| UN No. (IMDG) | 3082 | | | |
| UN No. (ICAO) | 3082 | | | |
| | 3082 | | | |
| UN No. (ADN) | | | | |
| 14.2. UN proper shipping name | _ | | | |
| Proper shipping name (ADR/RID) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | | | |
| Proper shipping name (IMDG) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | | | |
| Proper shipping name (ICAO) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | | | |
| Proper shipping name (ADN) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | | | |
| 14.3. Transport hazard class(e | s <u>)</u> | | | |
| ADR/RID class | 9 | | | |
| ADR/RID classification code | M6 | | | |
| ADR/RID label | 9 | | | |
| IMDG class | 9 | | | |
| ICAO class/division | 9 | | | |
| ADN class | 9 | | | |
| Transport labels | | | | |
| | | | | |
| 9 | | | | |
| 14.4. Packing group | | | | |
| 14.4. Facking group | | | | |

| ADR/RID packing group | Ш |
|-----------------------|---|
| IMDG packing group | Ш |
| ICAO packing group | Ш |
| ADN packing group | Ш |
| | |

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS

F-A, S-F 3

ADR transport category

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| Emergency Action Code | | |
|------------------------------|----|--|
| Hazard Identification Number | 90 | |
| (ADR/RID) | | |

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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

| EU legislation | Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). 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) (as amended). |
|----------------|--|
| Guidance | CHIP for everyone HSG228. |

15.2. Chemical safety assessment

SECTION 16: Other information

| Revision date | 20/10/2016 |
|---------------------------|--|
| Revision | 1 |
| SDS number | 4755 |
| 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. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. |

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Product Specification

| PRODUCT DETAILS | | | | |
|------------------------------------|--|---|--|--|
| Product Name | FENNEL OIL SWEET | | | |
| Product Code | OEFENNSWEE | OEFENNSWEE | | |
| INCI Name | Foeniculum Vulgare Oil | | | |
| Country or Origin | Bulgaria | | | |
| Tariff Number | 33012941 | | | |
| Natural Status | We hereby declare, to the best of our knowledge and from information received from our supplier, that this product is in accordance to the requirements of Articles 3 (2) (d) of Regulation (EC) 1334/2008 and therefore can be designated as natural. | | | |
| Food Grade Status | We confirm, from information received from our supplier, that this product conforms with EU Regulations and can be used in food. | | | |
| Kosher Certified | No | | | |
| Halal Certified | We hereby delcare, from information received from our supplier, that this product does not contain any ingredient derived from animal origin, extracted from hair or feathers, animal fats, animal extracts, blood of any origin, blood plasma, pork and/or other meat products, except sea food, dairy and poultry egg origin. This product does not contain alcohol (ethanol or grain alcohol) and has not been used in the manufacturing process. | | | |
| GMO Declaration | To the best of our knowledge and from information received from our supplier, this product does not derive from genetically modified starting raw material, or additives that are derived from genetically modifed organisms. | | | |
| Manufacturing Process | Foeniculum Vulgare Oil is the volatile oil obtained by steam distillation of the curshed seeds of | | | |
| | Fennel, Foeniculum vulgare, Umbelliferae. | | | |
| Identification | CAS No: 8006-84-6 | EINECS No: NA | | |
| | FEMA No: 2482 | Alternative Cas: NA | | |
| PHYSICAL AND CHEMICA | L CHARACTERISTIC | | | |
| Appearance | Liquid | Liquid | | |
| Colour | Colourless to pale yellow | | | |
| Odour | Characteristic | | | |
| Relative Density @ 20°c (g/ml) | 0.950 - 0.985 | | | |
| Refractive Index @ 20°c | 1.520 - 1.560 | 1.520 - 1.560 | | |
| Optical Rotation @ 20°c | +4.0 to +25.0 | | | |
| FRAGRANCE ALLERGENS | | | | |
| Limonene (5989-27-5) 3 - 8% | | | | |
| FOOD ALLERGENS | - 1 | | | |
| NONE PRESENT | | | | |
| IFRA | | | | |
| Limonene (5989-27-5) 3 - 8% | Estragole (140-67-0) 1-5% | 6 Anisaldehyde (123-11-5) <0.5% | | |
| STORAGE AND SHELF LIFE | | | | |
| Storage | | Store in tightly closed container with minimum headspace in a cool, dark and dry place. | | |

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Issue No: 1