SAFETY DATA SHEET (SDS)

Essential Oil: Mandarin, Green
SDS Created: 2 June 2015
Revision Date: June 2018

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

1.1 Globally Harmonized System (GHS) product identifier
Product name: Mandarin, Green
Latin name of botanical source: Citrus reticulata Blanco
INCI name: Citrus Nobilis (Mandarin Orange) Peel Oil

1.2 Other means of identification
Item number/size: 580 – Various sizes not to exceed 33.81 Fluid Ounces or 1 Liter.

1.3 Recommended use of the chemical and restrictions on use:
Aromatherapy, natural perfumery, as recommended. Do not ingest.

1.4 Supplier’s details:
Company name: Eden Botanicals
Company address: 3820 Cypress Drive, Suite 12, Petaluma, CA 94954
Company contact: 707-509-0041 www.edenbotanicals.com

1.5 Emergency telephone number:
For Transport Emergencies Only: 1-855-645-6677 (available 9:00 am - 5:00 pm, Pacific Standard Time)
Poison Control Center: 1-800-222-1222 (available 24 hours)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture
Flammable Liquid, Category 3
Skin irritation, Category 2
Skin sensitization, Category 1
Aspiration hazard, Category 1
Aquatic chronic, Category 1

2.2 GHS label elements, including precautionary statements

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Hazardous Statement</th>
<th>Precautionary Statement</th>
<th>Hazard Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H315 – Causes skin irritation</td>
<td>P210 – Keep away from heat/sparks/open flames/hot surfaces. –No smoking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H317 – May cause an allergic skin reaction</td>
<td>P273 - Avoid release to the environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H304 – May be fatal if swallowed and enters airways</td>
<td>P280 - Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H410 – Very toxic to aquatic life with long-lasting effects</td>
<td>P331: Do NOT induce vomiting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P301+310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/… [As modified by IV ATP]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P403+235: Store in a well ventilated place. Keep cool.</td>
<td></td>
</tr>
</tbody>
</table>
2.4 Other hazards that do not result in classification
Known photosensitizer. Remove contaminated clothing, wash skin thoroughly with soap and water. Avoid exposure to sun if mandarin oil has been applied to skin in pure or diluted amounts.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Composition

<table>
<thead>
<tr>
<th>Chemical Name (common name)</th>
<th>CAS#</th>
<th>EINECS#</th>
<th>ICSC #</th>
<th>RTECS#</th>
<th>UN#</th>
<th>EC#</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandarin Oil</td>
<td>849-29-38-4</td>
<td>284-521-0</td>
<td>N/A</td>
<td>OO6100000</td>
<td>1169</td>
<td>N/A</td>
<td>100%</td>
</tr>
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</table>

EU Allergens:

<table>
<thead>
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<th>Chemical Name</th>
<th>CAS#</th>
<th>EINECS#</th>
<th>ICSC #</th>
<th>RTECS#</th>
<th>UN#</th>
<th>EC#</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td>5989-27-5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;=75%</td>
</tr>
<tr>
<td>Citral</td>
<td>5392-40-5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt; 0.15%</td>
</tr>
<tr>
<td>Citronellol</td>
<td>106-22-9</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.004-0.02%</td>
</tr>
<tr>
<td>Linalool</td>
<td>78-70-6</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt; 0.2%</td>
</tr>
<tr>
<td>Geraniol</td>
<td>106-24-1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt; 0.01%</td>
</tr>
<tr>
<td>Prop 65:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;=1.8%</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary first-aid measures (of Substance)

Eye contact:
Check for and remove any contact lenses. Immediately wash thoroughly with soft, clean water for 15 minutes while holding the eyelids open. Cold water may be used. If symptoms persist, seek medical attention.

Skin Contact:
Remove contaminated clothing and wash the skin thoroughly with soap and water. Watch out for any remaining product between skin and clothing, watches, shoes, etc. In the event of an allergic reaction, seek medical attention. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to a hospital.

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

Ingestion:
Not an expected route of exposure. In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. Keep the exposed person at rest. Do NOT force vomiting unless directed to do so by medical personnel. Seek immediate medical attention and show the Substance’s label to medical personnel.

4.2 Most important symptoms and effects, both acute and delayed (of Substance)

Eye contact:
May cause eye irritation and corneal damage if not immediately rinsed out.

Skin Contact:
Known photosensitizer.

Inhalation:
Not specified

Ingestion:
Not specified

4.3 Indication of any immediate medical attention and special treatment needed (of Substance)

No data available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Flash point (Celsius/Fahrenheit)
51°C

5.2 Extinguishing media
Keep packages near the fire cool, to prevent pressurized containers from bursting.

Suitable extinguishing media: sprayed water or water mist, alcohol-resistant foam, multipurpose ABC powder, BC powder, carbon dioxide (CO2)

Unsuitable extinguishing media: water jet (straight stream).
5.3 Specific hazards arising from the chemical
A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health. In the event of a fire, the following may be formed: carbon monoxide (CO) and carbon dioxide (CO2).

5.4 Special protective actions for firefighters
Use self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Stop leak if you can do so without risk. Consult safety measures listed under Sections 7 and 8.
For non-firefighters:
Avoid any contact with the skin and eyes.
For firefighters:
Fire-fighters will be equipped with suitable personal protective equipment (See Section 8).

6.2 Environmental precautions
Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, or diatomaceous earth in drums for waste disposal. Avoid allowing product to reach sewage system or any waterways. Inform respective authorities in case of seepage into sewage system or waterways.

6.3 Methods and material for containment and cleaning up
Absorb spill with non-combustible matter (such as detergent--do not use solvents) and transfer to containers.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice. Avoid unintentional contact with skin surfaces. Wear suitable protective clothing. Ensure good ventilation or exhaust in workplace. Do not allow contact with eyes. Always wash hands after handling. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention: Handle in well-ventilated areas. Vapors are heavier than air. They can spread along the ground and form mixtures that are explosive with air. Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits. Prevent the accumulation of electrostatic charges with connections to earth. Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected. Keep packages tightly closed and away from sources of heat, sparks and naked flames. Do not use tools which may produce sparks. Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities
Store in tight glass, aluminum, or double-lined containers in a dark, cool, or refrigerated area away from direct heat. Always keep in packaging made of an identical material to the original. The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters
OSHA TWA: None established
OSHA STEL: None established
ACGIH TWA: None established
ACGIH STEL: None established
NOHSC TWA: None established
NOHSC STEL: None established

8.2 Appropriate engineering controls
General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

8.3 Individual protection measures
Personal protective equipment:
Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place away from the work area. Never eat, drink, or smoke during use. Remove and wash contaminated clothing before re-using.
**Eye/face protection:**
Avoid contact with eyes. Use eye protectors (safety goggles in accordance with standard EN166) designed to protect against liquid splashes.

**Hand protection:**
Wear suitable protective gloves (resistant to chemical agents in accordance with standard EN374) in the event of prolonged or repeated skin contact. Type of gloves recommended: Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR)) or PVA (Polyvinyl alcohol).

**Body protection:** Flame-retardant, antistatic protective clothing.
Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as back-up to engineering controls.

**SECTION 9: PHYSICAL CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Transparent liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Dark to brilliant green</td>
</tr>
<tr>
<td>Odor</td>
<td>Green, tart, sweet citrus</td>
</tr>
<tr>
<td>Miscibility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Miscibility in alcohol</td>
<td>Soluble</td>
</tr>
<tr>
<td>Miscibility in essential oil</td>
<td>Soluble</td>
</tr>
<tr>
<td>Liposolubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>177°C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>51°C</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not specified</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not specified</td>
</tr>
<tr>
<td>Density</td>
<td>0.8486-0.8531</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Melting point/melting range</td>
<td>Not specified</td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>Not specified</td>
</tr>
<tr>
<td>Decomposition point/decomposition range</td>
<td>Not specified</td>
</tr>
<tr>
<td>Refractive index @ 20°C</td>
<td>1.474-1.478</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not specified</td>
</tr>
<tr>
<td>Specific gravity @ 20°C</td>
<td>0.8486-0.8531</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity
Presentation no significant reactivity hazard by itself or in contact with water.

10.2 Chemical stability
This substance is stable under the recommended handling and storage conditions in Section 7.

10.3 Possibility of hazardous reactions
Oxidizing agent acid alkali light and air condition to avoid under nitrogen surface.

10.4. Conditions to avoid
Heat, flames, and sparks

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
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:
Oral route: LD50 > 5 gr/kg (rat)
Dermal route: LD50 > 5 gr/kg (rabbit)

Skin corrosion/irritation:
Known Photosensitizer. May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours. May cause an allergic reaction by skin contact. See Section 3.

Serious eye damage/irritation:
Eye exposure to essential oils may irritate the eyes. Prompt rinsing and removal of the substance will avoid damage.

Respiratory or skin sensitization:
Exposure to vapors from this solvent in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. See EU allergen list in Section 3.

Germ cell mutagenicity:
Not specified

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.
ACGIH: 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.
NTP: 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.
OSHA: 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:
Not specified

STOT - single exposure:
Not specified

STOT-related exposure:
Not specified

Aspiration hazard:
May be fatal if swallowed and enters airways. Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

11.2 Information on the likely routes of exposure
Skin/scalp contact

11.3 Symptoms related to the physical, chemical, and toxicological characteristics
None known. Irritation of the eye if exposed. Redness of the skin if acting as a photosensitizer.

11.4 Delayed and immediate effects and also chronic effects from short-term and long-term exposure
Exposure to vapors from this solvent in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver, and central nervous system.
Repeated or prolonged contact with the substance may cause removal of natural oil from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and reversible damage.

11.6 Interactive effects
Not specified

11.7 Other information
RTECS: OO6100000

SECTION 12: ECOLOGICAL INFORMATION

12.1 Info summery of Ecological information
Balance of data on substance as a whole, not determined.

12.2 Eco toxicological properties of specific substances
See each category below for specific substances
12.3 Toxicity

Acute fish toxicity:
LC50 / 96 HOUR – No data available
Toxicity to aquatic plants – No data available
Toxicity to microorganisms – No data available
Toxicity threshold – No data available

12.4 Persistence and degradability

Biodegradation is expected

12.5 Bio-accumulative potential

Bioaccumulation is unlikely

12.6 Mobility in soil

Unknown

12.7 Other adverse affect

Avoid exposure to marine environments and waterways

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not pour into drains or waterways. Observe all federal, state, and local environmental regulations. Member State-specific and Community-specific provisions must be considered. Considering the relevant known environmental and human health hazards of the materials, review and implement appropriate technical and procedural wastewater and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental release. This may include destructive techniques for waste and wastewater. In extreme situations, contact a licensed professional waste disposal service to dispose of this material.

Waste:

Proper waste management of the substance and/or its container must be determined in accordance with Directive 2008/98/EC. Do not pour into drains or waterways. 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. Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Soiled packaging:

Empty all containers completely. Keep label(s) on every container. Give to a certified disposal contractor.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number

UN 1169

14.2 UN Proper shipping name

UN1169 Extracts, Aromatic, Liquid

14.3 Transportation hazard classes

Class 3

14.4 Packing group, if applicable

PG III

14.4.1 Marking requirements

Not required for retail packages

14.5 Environmental hazards

No data available
14.6 Special precautions for user
None specified

14.7 Transport in bulk according to Annex II of MARPOL 73/78° and IBC Code
Not applicable

14.8 Additional transport information
Exceptions for class 3 CFR 49 173.150 (b) (c) (g) (Packaged for retail sale.)

SECTION 15: REGULATORY INFORMATION

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Not regulated</td>
</tr>
<tr>
<td>EU</td>
<td>See EU Allergens in Section 3</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Singapore</td>
<td>Not regulated</td>
</tr>
<tr>
<td>USA</td>
<td>California Prop. 65 Components</td>
</tr>
<tr>
<td></td>
<td>This contains chemicals known to the State of California to cause cancer, birth defects, and/or reproductive harm. See Section 3 for details.</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

Additional Information
This essential oil is phototoxic and may cause skin irritation if skin is exposed to sun after application of the oil in pure or dilute forms. Patch test is recommended.

Disclaimer
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<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Prepared By</th>
<th>Reviewed By</th>
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<tbody>
<tr>
<td>R.1</td>
<td>June 6, 2015</td>
<td>K. Goelz</td>
<td></td>
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<tr>
<td>R.2</td>
<td>June 17, 2015</td>
<td>H. Merrill</td>
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<td>R.3</td>
<td>November 1 2016</td>
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<td>November 15 2016</td>
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<td>R.7</td>
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