1. IDENTIFICATION

Product Description: CLEARWOOD

CAS #: 84238-39-1

Other means of identification

Vigon Item #: 504909

Recommended use: Concentrated aromatic ingredient which may be used fragrance compounds according to legal and IFRA guidelines.

Recommended restrictions: For Manufacturing Use Only

Company
Vigon International, Inc.
127 Airport Road
E. Stroudsburg, PA 18301

For information call: 570-476-6300

Web Site: www.vigon.com

2. HAZARD(S) IDENTIFICATION

Physical hazards: Not classified.

Health hazards: Aspiration hazard

Category 1

Environmental hazards: Hazardous to the aquatic environment, long-term hazard

Category 2

Label elements

Signal word: Danger

Hazard statement:

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention
P273 Avoid release to the environment.

Response
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P391 Collect spillage.

Storage
P405 Store locked up.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
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<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
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<tbody>
<tr>
<td>CLEARWOOD</td>
<td>Patchouli Leaf Water, patchouli oil replacer</td>
<td>84238-39-1</td>
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4. FIRST-AID MEASURES

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact: Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

Eye contact: Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

Ingestion: Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Most important symptoms/effects, acute and delayed: Aspiration may cause pulmonary edema and pneumonitis.

Indication of immediate medical attention and special treatment needed: Not available.

General information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray, fog, CO2, dry chemical, or alcohol resistant foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical: Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.

Fire fighting equipment/instructions: In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

Specific methods: Use water spray to cool unopened containers.

General fire hazards: Static charges generated by emptying package in or near flammable vapor may cause flash fire.
6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures:
  Keep unnecessary personnel away. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

- Methods and materials for containment and cleaning up:
  Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

  The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. Do not allow material to contaminate ground water system. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

Environmental precautions:
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment.

7. HANDLING AND STORAGE

- Precautions for safe handling:
  Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

- Conditions for safe storage, including any incompatibilities:
  Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Occupational exposure limits:
  No exposure limits noted for ingredient(s).

- Biological limit values:
  No biological exposure limits noted for the ingredient(s).

- Appropriate engineering controls:
  Use explosion-proof ventilation equipment to stay below exposure limits.

- Individual protection measures, such as personal protective equipment:
  - Eye/face protection:
    Wear safety glasses with side shields (or goggles).
  - Skin protection:
    Chemical resistant gloves.
  - Hand protection:
  - Other:
    Not available.
Respiratory protection

Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Refer to Spec Sheet

Physical state

Liquid.

Form

Liquid.

Color

Refer to Spec Sheet

Odor

Characteristic.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

> 200.0 °F (> 93.3 °C) Closed Cup

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

< 0.1 mm Hg at 20 °C

Vapor density

Not available.

Relative density

Not available.

Solubility(ies)

Solubility (water)

Insoluble

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity

Not available.

Other information

Molecular formula

Not applicable

Specific gravity

0.96 at 25 °C
10. STABILITY AND REACTIVITY

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products if stored and handled as indicated.

11. TOXICOCLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
No adverse effects due to inhalation are expected.

Skin contact
No adverse effects due to skin contact are expected.

Eye contact
Direct contact with eyes may cause temporary irritation.

Ingestion
Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics
Aspiration may cause pulmonary edema and pneumonitis.

Information on toxicological effects

Acute toxicity
May be fatal if swallowed and enters airways.

Product Species Test Results
CLEARWOOD (CAS 84238-39-1)

Acute
Dermal
LD50 Unspecified > 5000 mg/kg bw Limit test

Oral
LD50 Unspecified > 5000 mg/kg bw Limit test

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Skin irritation (in vivo) (EU Method B4) Not irritating

Serious eye damage/eye irritation
Eye irritation (in vitro) (OECD 437) Not an ocular corrosive or severe irritant
Eye irritation (in vivo) (Similar to OECD 405 ) Not irritating

Respiratory or skin sensitization
Not a respiratory sensitizer.

Skin sensitization
Sensitisation - human (HRIPT) Not a skin sensitizer (2%)

Germ cell mutagenicity
In vitro gene mutation study in bacteria - Ames test (OECD 471) Not mutagenic
In vitro cytogenicity study in mammalian cell (OECD 473) Not clastogenic
In vitro genotoxicity in mammalian cell (OECD 476) Not mutagenic

Carcinogenicity
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.
Reproductive toxicity  Toxicity to reproduction - screening (OECD 421) NOAEL = 277 mg/kg bw/day
Specific target organ toxicity - single exposure  Not classified.
Specific target organ toxicity - repeated exposure  Not classified.
Aspiration hazard  May be fatal if swallowed and enters airways.
Chronic effects  Repeated dose toxicity (28 days) (OECD 407) NOAEL = 977 mg/kg bw/day

12. ECOLOGICAL INFORMATION
Ecotoxicity  Toxic to aquatic life with long lasting effects.

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<th>Test Results</th>
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<tr>
<td>Algae</td>
<td>ErC50</td>
<td>Algae 73 mg/l, 72 hours Short-term toxicity</td>
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<tr>
<td>Crustacea</td>
<td>LL50</td>
<td>Invertebrates (Invertebrates) 21 mg/l, 48 hours Short-term toxicity</td>
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<tr>
<td>Fish</td>
<td>LL50</td>
<td>Fish 5.7 mg/l, 96 hours Growth inhibition study</td>
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* Estimates for product may be based on additional component data not shown.

Persistence and degradability  Ready biodegradation (OECD 301F) Readily biodegradable
Bioaccumulative potential  No data available.
Mobility in soil  No data available.
Other adverse effects  No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS
Disposal instructions  Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations  Dispose in accordance with all applicable regulations.
Hazardous waste code  Not established.
Waste from residues / unused products  Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging  Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
## 14. TRANSPORT INFORMATION

### ADN

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### IATA

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Subsidiary class(es) -
Packing group III
Environmental hazards
  Marine pollutant Yes
Labels required 9
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

ADN; ADR; DOT BULK; IMDG; RID

Marine pollutant

15. REGULATORY INFORMATION

US federal regulations
  This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
  CERCLA Hazardous Substance List (40 CFR 302.4)
    Not listed.
  US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
    Not listed.
  SARA 304 Emergency release notification
    Not regulated.
  OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
    Not listed.
  TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
    Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
- Immediate Hazard - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
  Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
  Not regulated.
- Safe Drinking Water Act (SDWA)
  Not regulated.

US state regulations
- US. Massachusetts RTK - Substance List
  Not regulated.
- US. New Jersey Worker and Community Right-to-Know Act
  Not listed.
- US. Pennsylvania Worker and Community Right-to-Know Law
  Not listed.
- US. Rhode Island RTK
  Not regulated.
- US. California Proposition 65
  Not listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

International Inventories

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<th>Inventory name</th>
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<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
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<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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### 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

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#### Disclaimer

Vigon cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon’s knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.