# SAFETY DATA SHEET

# 502616 CITRONELLOL NATURAL



## 1. IDENTIFICATION

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|---|---|
| **Product Description:** | **CITRONELLOL NATURAL** |
| **CAS #** | 106-22-9 |
| **FEMA Number** | 2309 |
| **Other means of identification** | |
| **Vigon Item #** | 502616 |
| **Recommended use** | Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA 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

24 Hour Emergency Response Information

INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

| | | |
|---|---|---|
| **Company name** | Vigon International, Inc. | |
| **Address** | 127 Airport Road<br>E. Stroudsburg, PA 18301<br>United States | |
| **Telephone** | For information call: | 570-476-6300 |
| **Website** | www.vigon.com | |
| **E-mail** | regulatory@vigon.com | |
| **Emergency phone number** | INFOTRAC<br>1-800-535-5053<br>1-352-323-3500 | (ACCT# 78928);<br>WITHIN THE U.S.A.<br>OUTSIDE THE U.S.A. |

## 2. HAZARD(S) IDENTIFICATION

| | | |
|---|---|---|
| **Physical hazards** | Not classified. | |
| **Health hazards** | Acute toxicity, oral | Category 5 |
| | Acute toxicity, dermal | Category 5 |
| | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2A |
| | Sensitization, skin | Category 1 |
| **Environmental hazards** | Hazardous to the aquatic environment, acute hazard | Category 2 |

**Label elements**

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| **Signal word** | Warning |
| **Hazard statement** | |
| H303 + H313 | May be harmful if swallowed or in contact with skin. |
| H315 | Causes skin irritation. |
| H315 + H320 | Causes skin and eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H401 | Toxic to aquatic life. |
| **Precautionary statement** | |
| **Prevention** | |
| P264 | Wash thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear eye protection/face protection. |
| P280 | Wear protective gloves. |
| **Response** | |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| **Storage** | Store away from incompatible materials. |
| **Disposal** | |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | None known. |
| **Supplemental information** | 100% of the substance consists of component(s) of unknown acute inhalation toxicity. |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| CITRONELLOL | 3,7-DIMETHYL-6-OCTEN-1-OL<br>6-Octen-1-ol, 3,7-dimethyl-<br>2,6- dimethyl-2-octen-8-ol | 106-22-9 | 100 |

## 4. FIRST-AID MEASURES

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| **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** | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |
| **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

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| **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

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| **Personal precautions, protective equipment and emergency procedures** | Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Keep unnecessary personnel away. 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**

Collect and dispose of spillage as indicated in section 13 of the SDS.

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.

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains.

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. 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.

**Environmental precautions**

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

## 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**

This substance has no PEL, TLV, or other recommended exposure limit.

**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. Adequate ventilation should be provided so that exposure limits are not exceeded.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles). Face shield is recommended.

**Skin protection**

**Hand protection**

Chemical resistant gloves.

**Other**

Use of an impervious apron is recommended.

**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.

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| **General hygiene considerations** | Keep away from food and drink. 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. Contaminated work clothing should not be allowed out of the workplace. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| **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** | 255.2 °F (124 °C) at 20 hPa |
| **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** | 0.01 kPa (77 °F (25 °C)) |
| **Vapor density** | 5.4 |
| **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** | |
| **Explosive properties** | Not explosive. |
| **Flammability class** | Combustible IIIB estimated |
| **Molecular formula** | C10H20O |
| **Molecular weight** | 156.27 g/mol |

| | |
|---|---|
| | 156.27 g/mol |
| **Oxidizing properties** | Not oxidizing. |
| **Specific gravity** | 0.86 at 25 °C |

## 10. STABILITY AND REACTIVITY

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|---|---|
| **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. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

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|---|---|
| **Inhalation** | Knowledge about health hazard is incomplete. |
| **Skin contact** | May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. |
| **Eye contact** | Causes serious eye irritation. Causes mild eye irritation. |
| **Ingestion** | May be harmful if swallowed. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |

**Information on toxicological effects**

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|---|---|
| **Acute toxicity** | May be harmful in contact with skin. May be harmful if swallowed. |

| Product | Species | Test Results |
|---|---|---|
| CITRONELLOL NATURAL (CAS 106-22-9) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 2650 mg/kg |
| *Oral* | | |
| LD50 | Rat | 3450 mg/kg |

| | |
|---|---|
| **Skin corrosion/irritation** | Causes skin irritation. |
| **Serious eye damage/eye irritation** | Causes serious eye irritation. |

**Respiratory or skin sensitization**

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|---|---|
| **Respiratory sensitization** | Due to partial or complete lack of data the classification is not possible. |
| **Skin sensitization** | May cause an allergic skin reaction. |
| **Germ cell mutagenicity** | Due to partial or complete lack of data the classification is not possible. |
| **Carcinogenicity** | Due to partial or complete lack of data the classification is not possible. |

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

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| **Reproductive toxicity** | Due to partial or complete lack of data the classification is not possible. |
| **Specific target organ toxicity - single exposure** | Due to partial or complete lack of data the classification is not possible. |
| **Specific target organ toxicity - repeated exposure** | Due to partial or complete lack of data the classification is not possible. |
| **Aspiration hazard** | Due to partial or complete lack of data the classification is not possible. |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Toxic to aquatic life.

| Product | | Species | Test Results |
|---|---|---|---|
| CITRONELLOL (CAS 106-22-9) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Algae | EC50 | Algae | 2.4 mg/l, 72 hours |
| Crustacea | EC50 | Daphnia | 17 mg/l, 48 hours |
| Fish | LC50 | Leuciscus idus (Golden orfe) | > 10 - < 22 mg/l, 96 hours |

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| **Persistence and degradability** | No data is available on the degradability of this substance. |
| **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

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| **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** | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## 14. TRANSPORT INFORMATION

**ADN**

Not regulated as dangerous goods.

**ADR**

Not regulated as dangerous goods.

**RID**

Not regulated as dangerous goods.

**DOT**

**BULK**

Not regulated as dangerous goods.

**DOT**

**NON-BULK**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

## 15. REGULATORY INFORMATION

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Toxic Substances Control Act (TSCA)**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

| | |
|---|---|
| **SARA 311/312 Hazardous chemical** | Yes |
| **Classified hazard categories** | Skin corrosion or irritation<br>Serious eye damage or eye irritation<br>Respiratory or skin sensitization |

**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.

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Issue date** 11-28-2015

**Revision date** 10-21-2020

**Version #** 08

**HMIS® ratings** Health: 2
Flammability: 2
Physical hazard: 0

**Disclaimer** Vigon International, Inc. 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, and disposal and should not be considered as a guarantee or quality specification. This product has not been evaluated for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. Vigon International, Inc. has performed no testing on these products in e-cig/vaping applications. It is the sole responsibility of the individual(s) purchasing this product to assess its' safety in the final application. 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.

**Revision information**

Product and Company Identification: Vigon Values
FIRST-AID MEASURES: Most important symptoms/effects, acute and delayed
EXPOSURE CONTROLS/PERSONAL PROTECTION: General hygiene considerations
EXPOSURE CONTROLS/PERSONAL PROTECTION: Eye/face protection
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
TOXICOLOGICAL INFORMATION: Skin contact
TOXICOLOGICAL INFORMATION: Skin contact
TOXICOLOGICAL INFORMATION: Symptoms related to the physical, chemical and toxicological characteristics
Ecological Information: Ecotoxicity
ECOLOGICAL INFORMATION: Ecotoxicity