

## SAFETY DATA SHEET

### 502796 HEDIONE®

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#### 1. IDENTIFICATION

**Product Description:** HEDIONE®  
**CAS #** 24851-98-7  
**FEMA Number** 3408  
**Other means of identification**  
**Vigon Item #** 502796  
**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  
E. Stroudsburg, PA 18301  
United States  
**Telephone** For information call: 570-476-6300  
**Website** www.vigon.com  
**E-mail** Not available.  
**Emergency phone number** INFOTRAC (ACCT# 78928);  
1-800-535-5053 WITHIN THE U.S.A.  
1-352-323-3500 OUTSIDE THE U.S.A.

#### 2. HAZARD(S) IDENTIFICATION

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Hazardous to the aquatic environment, Category 3  
long-term hazard

**Label elements**



**Signal word** None.  
**Hazard statement** Harmful to aquatic life with long lasting effects.

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**Precautionary statement**

**Prevention** Avoid release to the environment.  
**Response** Wash hands after handling.  
**Storage** Store away from incompatible materials.  
**Disposal** 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 mixture consists of component(s) of unknown acute inhalation toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**

Chemical name	Common name and synonyms	CAS number	%
METHYL DIHYDRO JASMONATE	Methyl 3-oxo-2-pentylcyclopentaneacetate CYCLOPENTANEACETAI ACID, 3-OXO-2-PENTYL-, METHYL ESTER cepionate 3-Oxo-2-pentylcyclopentaneacetic acid methyl ester	24851-98-7	100

### 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** Direct contact with eyes may cause temporary irritation.

**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.



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<b>Special protective equipment and precautions for firefighters</b>	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.
<b>Fire fighting equipment/instructions</b>	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.
<b>Specific methods</b>	Use water spray to cool unopened containers.
<b>General fire hazards</b>	Static charges generated by emptying package in or near flammable vapor may cause flash fire.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Methods and materials for containment and cleaning up</b>	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. 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.

<b>Environmental precautions</b>	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.
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### 7. HANDLING AND STORAGE

<b>Precautions for safe handling</b>	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.
<b>Conditions for safe storage, including any incompatibilities</b>	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

<b>Occupational exposure limits</b>	This substance has no PEL, TLV, or other recommended exposure limit.
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).

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**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).

**Skin protection**

**Hand protection** Chemical resistant gloves.

**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

<b>Appearance</b>	Refer to Spec Sheet
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Refer to Spec Sheet
<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	228.2 - 233.6 °F (109 - 112 °C) at 0.2 mmHg
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0.1 mm Hg at 20 °C
<b>Vapor density</b>	7.8
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble

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Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
<b>Other information</b>	
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Molecular formula	C <sub>13</sub> H <sub>22</sub> O <sub>3</sub>
Oxidizing properties	Not oxidizing.
Specific gravity	1 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. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes mild skin irritation.
Eye contact	Causes mild eye irritation.
Ingestion	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**  
Direct contact with eyes may cause temporary irritation.

#### Information on toxicological effects

**Acute toxicity** Not known.

Product	Species	Test Results
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METHYL DIHYDRO JASMONATE (CAS 24851-98-7)

**Acute**

*Dermal*

LD50

Rabbit

> 5000 mg/kg (OECD 401)

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Product	Species	Test Results
<i>Oral</i> LD50	Rat	> 5000 mg/kg (OECD 402)

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

<b>Skin corrosion/irritation</b>	Irritation (dermal)(FHSA): Moderately irritant @ 100% Irritation (dermal)(Human max.): non-irritant @ 20%
<b>Serious eye damage/eye irritation</b>	Irritation (ocular, rabbit)(OECD 405): Minimally irritating @ 100%
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	Sensitization (OECD 406, Buehler): Non-sensitizing @ 10% Sensitization (Guinea Pig Maximization)(OECD 406): Non-sensitizing Sensitization (HRIPT): Non sensitizing @ 20% Sensitization (Human max.): Non sensitizing @ 20% white petrolatum Sensitization (HRIPT) : Non sensitizing @ 20% DEP Sensitization (HRIPT): Non sensitizing @ 20% (25% Ethanol/75% DEP)
<b>Germ cell mutagenicity</b>	Mutagenicity (Mouse lymphoma specific locus test): Effects on mutant frequency Mutagenicity (Mouse micronucleus assay)(OECD 474): No effects Mutagenicity (OECD 471, tested 3 times): Non-mutagenic Mutagenicity (OECD 476): Non-mutagenic Genotoxicity (OECD 486): No effects

### Carcinogenicity

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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

Not listed.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

<b>Reproductive toxicity</b>	Pre-natal developmental toxicity (dietary, rat)(OECD 414): Fetal NOAEL @ 120 mg/kg/day (max dose) and maternal NOAEL @ 80 mg/kg/day.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Further information</b>	Local lymph node assay (OECD 429) : EC3 > 100% (> 25000 microg/cm2)

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
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Product	Species	Test Results
METHYL DIHYDRO JASMONATE (CAS 24851-98-7)		
<i>Aquatic</i>		
<i>Acute</i>		
Crustacea	EC50	Daphnia
		> 16.1 mg/l, 48 hours (OECD 202)

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

<b>Persistence and degradability</b>	Ready biodegradability(OECD 301F): Readily biodegradable
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	Not established.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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.



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## 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.

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

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### 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 - No  
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.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes





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Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 11-30-2015  
**Revision date** 07-06-2017  
**Version #** 04  
**HMIS® ratings** Health: 1  
Flammability: 1  
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, 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** This document has undergone significant changes and should be reviewed in its entirety.