

# Safety Data Sheet

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product Name	<b>Ionone Mixture, Natural</b>
Product Number	<b>0259495</b>
CAS-No.	<b>127-41-3 / 14901-07-6</b>

### 1.2 Product Recommended Use

**Flavorings**

### 1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992- USA
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Telephone	845-496-6065
Fax	845-496-6248

### 1.4 Emergency Telephone Number

1-800-535-5053  
International - 1-352-323-3500 collect

## Section 2: HAZARD(s) IDENTIFICATION

### 2.1 Classification of substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)	Acute Aquatic Toxicity (Category 2) H401 Specific target organ toxicity-single exposure (Category 1) Respiratory System H334
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### 2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement

**DANGER**

Hazard Statement(s)

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H401	Toxic to aquatic life

Precautionary Statement(s)

P261	Avoid breathing dust/fumes/gas/mist/vapors/spray
P285	In case of inadequate ventilation, wear respiratory protection
P304+P341	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P273	Avoid release to the environment
P501	Dispose of contents/container to an approved waste disposal plant

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2.3 HNOC (Hazards not otherwise classified or not covered by GHS) None

## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms	Fermentone Mixture (Alpha and Beta Ionone Mixture)
Formula	C <sub>13</sub> H <sub>20</sub> O
Molecular Weight	192.30 g/mol
CAS-No	127-41-3 / 14901-07-6
EC-No.	204-841-6 / 201-224-3

#### Hazardous Components

Component	Classification	Concentration
4-(2,6,6-Trimethyl-2-cyclohexenyl)-3-buten-2-one	Specific target organ toxicity-single exposure (1) Respiratory System, H334	65-90%
4-(2,6,6-Trimethyl-1-cyclohexenyl)-3-buten-2-one	Acute aquatic toxicity, (2) H401	30% Max

## Section 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation	Provide fresh air; keep at rest and at a comfortable position to breathe. Consult a physician/Poison Control Center.
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water. Consult a physician
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 minutes as a precaution.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Clothing contamination:	Remove contaminated clothing and wash before reuse.

4.2 Most important symptoms and effects both acute and delayed See section 2.2 and or section 11

4.3 Indication of any immediate medical attention and special treatment needed. No data available

## Section 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing Media

Suitable Extinguishing Media	For small (incipient) fires, use media such as alcohol foam, dry chemicals, carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities
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(flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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|-----|--|---|
| 5.2 | <b>Special hazards arising from the substance or mixture</b> | Carbon oxides   |
| 5.3 | <b>Advice for fire fighters</b>                              | Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions. |
| 5.4 | <b>Further information</b>                                   | Use water spray to cool unopened containers.  |

## Section 6: ACCIDENTIAL RELEASE MEASURES

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|-----|--|--|
| 6.1 | <b>Personal precautions, protective equipment and emergency procedures</b> | Use personal protective equipment. Avoid breathing vapors. Mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. |
| 6.2 | <b>Environment precautions</b>   | Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system. Discharge into the environment must be avoided.   |
| 6.3 | <b>Methods and materials for containment and clean up</b>                  | Pick up and arrange disposal without creating dust. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.  |
| 6.4 | <b>Specific end use(s)</b>   | Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.   |

## Section 7: HANDLING AND STORAGE

- |     |                                      |  |
|-----|--------------------------------------|--|
| 7.1 | <b>Precautions for safe handling</b> | Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use normal measures for preventive fire protection.   |
| 7.2 | <b>Conditions for Safe storage</b>   | Light & Heat sensitive. Store in tightly sealed glass or aluminum containers, tightly closed and in a dry and well-ventilated area away from sunlight and heat. Containers which have been opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature 2-8°C. |
| 7.3 | <b>Specific End use(s)</b>           | Flavorings   |

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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|-----|---|--|
| 8.1 | <b>Control parameters</b><br>Components with workplace control parameters | Contains no substance with workplace control parameters  |
| 8.2 | <b>Exposure Controls</b><br>Appropriate Engineering Controls              | Handle in accordance with good industrial hygiene and safety practices.  |
|     | <b>Personal protective equipment</b>                                      | <b>These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situations of anticipated use by our customers. They should not be construed as offering an approval or any specific use scenario.</b> |

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Eye/face protection	Wear appropriate tightly fitted safety goggles; face shield (8" min). Tested and approved government standards such as NIOSH tested and approved.
Skin protection	Wear chemically resistant rubber gloves. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.
Body protection	Complete suit protecting against chemicals should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator with multi-purpose combination (U) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full faced supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (U) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a	Appearance	Light to dark yellow liquid
b	Odor	Characteristic Ionone
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	Melting Point: 42-47°C
f	Boiling Point	237°C
g	Flash Point	>110°C closed cup
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density @25°C	0.926-0.949
n	Solubility	Insoluble in water, soluble most organic solvents
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available
q	Decomposition Temp.	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

## Section 10: STABILITY AND REACTIVITY

10.1 Reactivity No data available

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10.2	<b>Chemical Stability</b>	Stable under recommended storage conditions
10.3	<b>Possibility of Hazardous reactions</b>	No data available
10.4	<b>Conditions to avoid</b>	Heat and Light
10.5	<b>Incompatible materials</b>	Strong oxidizing agents
10.6	<b>Hazardous decomposition products</b>	No data available
10.7	<b>Further Information</b>	No data available

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute Toxicity

LD50-Oral- Rat <i>Alpha Ionone</i>	No data available
LD50-Oral-Rat <i>Beta Ionone</i>	7,120 mg/kg

LC50-Inhalation	No data available
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LD50-Dermal-Rat (M/F) <i>Alpha Ionone</i>	No data available
LD50-Dermal-Rat (M/F) <i>Beta Ionone</i>	>2,000 mg/kg
LD-50 Intraperitoneal-Mouse <i>Alpha Ionone</i>	2,277 mg/kg

LD-50 Intraperitoneal-Mouse <i>Beta Ionone</i>	No data available
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Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available

#### Carcinogenicity

IARC No component of this product, present 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 a carcinogen or potential carcinogen by ACGIH.

NTP No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity – *Beta Ionone*

Hamster- Oral  
Effects on fertility: Post implantation mortality (e.g. dead and or/resorbed implants per total number of implants)

#### Teratogenicity

No data available

Specific target organ toxicity-single exposure (GHS) May cause respiratory irritation

Specific target organ toxicity-repeated exposures (GHS) No data available

Aspiration Hazards No data available

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Additional Information – *Beta Ionone*

Repeated dose toxicity- Rat-Female-Oral: No observed adverse effect level 83 mg/kg.  
Lowest observed adverse effect level – 801 mg/kg

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effects  
RTECS:

No data available  
Not available

## Section 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity – *Beta Ionone*

To Fish:

LC50-Pimehpales promelas (fathead minnow) 5.09 mg/l 96 hr

To Daphnia and other aquatic invertebrates:

EC50- Static Test – Daphnia magna (water flea) 4.03 48 hr  
(OECD Test Guideline 202)

To Algae:

EC50- Static Test–Desmodesmus subspicatus (green algae) 22.15 mg/l 72 hr

To Bacteria:

EC50-Respiration Inhibition-Sludge Treatment 100-200 mg/l 180m  
(OECD Test Guideline 209)

### 12.2 Persistence and degradability – *Beta Ionone*

Biodegradability – Aerobic-Exposure Time 28 h  
Result: 70-80% Readily biodegradable

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required / not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1 Disposal methods

Product:  
Packaging

According to local regulations  
According to local regulations

## Section 14: TRANSPORT INFORMATION

DOT (US)  
IMDG  
IATA

Not dangerous goods  
Not dangerous goods  
Not dangerous goods

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## Section 15: REGULATORY INFORMATION

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	Acute Health Hazard
Massachusetts Right to Know components	No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right to Know components	4-(2,6,6-Trimethyl-2-cyclohexenyl)-3-buten-2-one CAS# 127-41-3 Rev Date: 4-(2,6,6-Trimethyl-1-cyclohexenyl)-3-buten-2-one CAS# 79-77-6 Rev. Date:
New Jersey Right to Know components	4-(2,6,6-Trimethyl-2-cyclohexenyl)-3-buten-2-one CAS# 127-41-3 Rev Date: 4-(2,6,6-Trimethyl-1-cyclohexenyl)-3-buten-2-one CAS# 79-77-6 Rev. Date:
California Prop. 65 components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16: OTHER INFORMATION

### HMIS Rating

Health hazard	2
Chronic Health Hazard*	
Flammability	1
Reactive Hazard	0

### Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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