

**SAFETY DATA SHEET****507294 SARRIETTE BASE (199618 D)**

Revision Date: 01-06-2016

Page 1 of 17

Version # 01

Print Date: 01-06-2016

**1. IDENTIFICATION**

<b>Product Description:</b>	<b>SARRIETTE BASE (199618 D)</b>
<b>CAS #</b>	MIXTURE
<b>Other means of identification</b>	
<b>Vigon Item #</b>	507294
<b>Recommended use</b>	Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.
<b>Recommended restrictions</b>	For Manufacturing Use Only
<b>Company</b>	<b>24 Hour Emergency Response Information</b>
Vigon International, Inc.	INFOTRAC (ACCT# 78928);
127 Airport Road	1-800-535-5053 WITHIN THE U.S.A.
E. Stroudsburg, PA 18301	1-352-323-3500 OUTSIDE THE U.S.A.
For information call: 570-476-6300	
Web Site: www.vigon.com	

**2. HAZARD(S) IDENTIFICATION**

<b>Physical hazards</b>	Flammable liquids	Category 4
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, long-term hazard	Category 3

**Label elements**

<b>Signal word</b>	Danger
<b>Hazard statement</b>	
H227	Combustible liquid.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H371	May cause damage to organs.
H412	Harmful to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260	Do not breathe mist or vapor.

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 2 of 17

Version # 01

Print Date: 01-06-2016

P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/eye protection/face protection.

#### 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.  
 P310 Immediately call a POISON CENTER/doctor.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P370 + P378 In case of fire: Use appropriate media to extinguish.

#### Storage

P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.

#### Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
(2S)-PROPYL 2-(1,1-DIMETHYLPROPOXY)PROPANOATE	propyl (2S)-2-(1,1-dimethylpropoxy) propanoate Propanoic acid, 2-(1,1-dimethylpropoxy)-, propyl ester, (2S)-	319002-92-1	10 - < 15
LINALOOL	2,6-DIMETHYL-2,7-OCTADIENE-6-OL 1,6-Octadien-3-ol, 3,7-dimethyl- 3,7-Dimethylocta-1,6-dien-3-ol LINALYL ALCOHOL	78-70-6	10 - < 15
1,3-OXATHIANE, 2-ETHYL-4,4-DIMETHYL-	2- ethyl-4,4-dimethyl-1,3-oxathiane	444880-09-5	7.5 - < 10
4-CYCLOHEXYL-2-METHYLBUTAN-2-OL	2,2- dimethyl cyclohexane propanol alpha,alpha- dimethyl cyclohexane propanol	83926-73-2	7.5 - < 10
CAMPHOR	1,7,7-trimethylbicyclo[2.2.1]heptan-2-one 2-oxo-bornane 2-camphonone	76-22-2	2.5 - < 5

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 3 of 17

Version # 01

Print Date: 01-06-2016

Chemical name	Common name and synonyms	CAS number	%
EUCALYPTOL	4,7,7- trimethyl-8-oxabicyclo[2.2.2]octane 1,8-cineole 1,3,3-trimethyl oxabicyclo(2.2.2)octane 1,8-oxi-do-para-menthane	470-82-6	2.5 - < 5
HYDROGENATED METHYL ROSINATE		8050-15-5	2.5 - < 5
METHYL 2-ETHYLHEXANOATE	2- ethyl hexanoic acid methyl ester	816-19-3	2.5 - < 5
PINENE ALPHA	dextro,laevo-pin-2(3)-ene 2,6,6 - trimethyl bicyclo-3,1,1-2-heptene 4,7,7- trimethylbicyclo[3.1.1]hept-3-ene	80-56-8	2.5 - < 5
1-Propanol, 2-[1-(3,3-dimethylcyclohexyl) ethoxy]-2-methyl-,propanoate	[2-[1-(3,3-dimethylcyclohexyl)ethoxy] -2-methylpropyl]propanoate	141773-73-1	1 - < 2.5
2,2-Dimethyl-3-(3-methylpenta-2,4- dienyl)oxirane	Oxirane, 2,2-dimethyl-3- (3-methyl-2,4-pentadien-1-yl)-	69103-20-4	1 - < 2.5
2,4-DIMETHYLCYCLOHEX-3-ENE- 1-CARBALDEHYDE	4-formyl-1,3-dimethylcyclohex-1-ene 2,4-DIMETHYL-3-CYCLOHEXEN-1- CARBOXALDEHYDE 3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl- DIMETHYLCYCLOHEX-3-ENE-1- CARBALDEHYDE (MIXED ISOMERS)	68039-49-6	1 - < 2.5
2-CYCLOHEXEN-1-ONE, 2-METHYL-5- (1-METHYLETHENYL)-	delta-p- mentha-1(6),8-dien-2-one p- mentha-6,8-dien-2-one 2- methyl-5-(1-methylethenyl)- 2-cyclohexen-1-one	99-49-0	1 - < 2.5
4-ISOPROPENYLCYCLOHEX-1- EN-1-YLMETHANOL	1-cyclohexene-1-methanol, 4-(1-methylethenyl) p-mentha-1,8-dien-7-ol PERILLA ALCOHOL	536-59-4	1 - < 2.5
CYMENE PARA	1- methyl-4-propan-2-ylbenzene 4-METHYL ISOPROPYL BENZENE Methyl isopropyl benzene DOLCYMENE 4-iso propyl toluene para-methylcumene camphogen	99-87-6	1 - < 2.5
methyl 2,2-dimethyl- 6-methylenecyclohexane carboxylate	2,2- dimethyl-6-methylene cyclohexane carboxylic acid methyl ester	81752-87-6	1 - < 2.5

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 4 of 17

Version # 01

Print Date: 01-06-2016

Chemical name	Common name and synonyms	CAS number	%
THYMOL	3-HYDROXY-P-CYMENE 5-Methyl-2-(1-methylethyl)phenol Phenol, 5-methyl-2-(1-methylethyl)- 6-ISOPROPYL-3-METHYLPHENOL 5-METHYL-2-ISOPROPYLPHENOL 3-METHYL-6-ISOPROPYLPHENOL 2-ISOPROPYL-5-METHYLPHENOL	89-83-8	1 - < 2.5
BICYCLO 2.2.1 HEPTAN-2-OL, 1,7,7-TRIMETHYL-, (1S-ENDO)-	laevo-2- hydroxybornane laevo-2- camphanol laevo-endo-2- hydroxycamphane	464-45-9	0.5< 1
EXO-2-BORNANOL	DL-iso borneol exo-2- hydroxy-1,7,7-trimethyl norbornane	124-76-5	0.5< 1
1-METHOXY-4-(1-PROPENYL) BENZENE	4-methoxy-1-propenyl benzene para-methoxy-beta-methyl styrene	104-46-1	0.1< 0.5
3-METHYLHEX-2-ENYL ACETATE	aladinate 3-methylhex-2-en-1-yl acetate	341017-24-1	0.1< 0.5
4- penten-1-one, 1-(5,5-dimethyl-1-cyclohexen-1-yl)	1-(5,5-DIMETHYL-1-CYCLOHEXEN-1-YL) -4-PENTEN-1-ONE dimethyl cyclohexenyl 3-butenyl ketone	56973-85-4	0.1< 0.5
MENTHONE LAEVO	p-menthan-3-one racemic 5-methyl-2-(1-methyl ethyl) cyclohexanone racemic 2 iso propyl-5-methyl cyclohexanone racemi c 5- methyl-2-propan-2-ylcyclohexan-1-one	89-80-5	0.1< 0.5
Other components below reportable levels			20 - < 30

#### 4. FIRST-AID MEASURES

<b>Inhalation</b>	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.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of immediate medical attention and special treatment needed</b>	Not available.
<b>General information</b>	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.



## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 5 of 17

Version # 01

Print Date: 01-06-2016

---

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Specific hazards arising from the chemical</b>	Fire may produce irritating, corrosive and/or toxic gases.
<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.

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#### 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>	<p>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.</p> <p>The product is immiscible with water and will spread on the water surface.</p> <p>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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>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.</p>
<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.



# SAFETY DATA SHEET

## 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 6 of 17

Version # 01

Print Date: 01-06-2016

### 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. All equipment used when handling the product must be grounded. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling. Take precautionary measures against static discharges. Avoid breathing vapor.
<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

#### Occupational exposure limits

##### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
CAMPHOR (CAS 76-22-2)	PEL	2 mg/m <sup>3</sup>

##### US. ACGIH Threshold Limit Values

Components	Type	Value
CAMPHOR (CAS 76-22-2)	STEL	3 ppm
	TWA	2 ppm
PINENE ALPHA (CAS 80-56-8)	TWA	20 ppm

##### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
CAMPHOR (CAS 76-22-2)	REL	2 mg/m <sup>3</sup>
	TWA	2 mg/m <sup>3</sup>

**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. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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

<b>Eye/face protection</b>	Avoid contact with eyes.
<b>Skin protection</b>	
<b>Hand protection</b>	Chemical resistant gloves.
<b>Other</b>	Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using do not smoke. 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.

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 7 of 17

Version # 01

Print Date: 01-06-2016

---

#### 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>	Not available.
<b>Flash point</b>	162.0 °F (72.2 °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>	0.3 mm Hg at 20 °C
<b>Vapor density</b>	Not available.
<b>Relative density</b>	0.93 at d 20/20
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Molecular formula</b>	Not applicable
<b>VOC (Weight %)</b>	< 63 %

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#### 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 8 of 17

Version # 01

Print Date: 01-06-2016

<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products if stored and handled as indicated.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs by inhalation. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** May cause an allergic skin reaction.

Components	Species	Test Results
<b>(2S)-PROPYL 2-(1,1-DIMETHYLPROPOXY) PROPANOATE (CAS 319002-92-1)</b>		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
<b>1-METHOXY-4-(1-PROPENYL) BENZENE (CAS 104-46-1)</b>		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	3000 mg/kg
<b>1-Propanol, 2-[1-(3,3-dimethylcyclohexyl) ethoxy]-2-methyl-,propanoate (CAS 141773-73-1)</b>		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg (OECD 401: limit)
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg (OECD 402: limit)
<b>2,2-Dimethyl-3-(3-methylpenta-2,4-dienyl)oxirane (CAS 69103-20-4)</b>		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg OECD 402
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg OECD 401



## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 9 of 17

Version # 01

Print Date: 01-06-2016

Components	Species	Test Results
2,4-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE (CAS 68039-49-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	2500 mg/kg
<i>Oral</i>		
LD50	Rat	2500 mg/kg
2-CYCLOHEXEN-1-ONE, 2-METHYL-5- (1-METHYLETHENYL)- (CAS 99-49-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	3800 mg/kg
<i>Oral</i>		
LD50	Rat	1640 mg/kg
4- penten-1-one, 1-(5,5-dimethyl-1-cyclohexen-1-yl) (CAS 56973-85-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
4-CYCLOHEXYL-2- METHYLBUTAN-2-OL (CAS 83926-73-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
4-ISOPROPENYLCYCLOHEX-1- EN-1-YLMETHANOL (CAS 536-59-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	2100 mg/kg
BICYCLO 2.2.1 HEPTAN-2-OL, 1,7,7-TRIMETHYL-, (1S-ENDO)- (CAS 464-45-9)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
CAMPHOR (CAS 76-22-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	1310 mg/kg

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 10 of 17

Version # 01

Print Date: 01-06-2016

Components	Species	Test Results
CYMENE PARA (CAS 99-87-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	4750 mg/kg
EUCALYPTOL (CAS 470-82-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	2480 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Coma.
EXO-2-BORNANOL (CAS 124-76-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
HYDROGENATED METHYL ROSINATE (CAS 8050-15-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
LINALOOL (CAS 78-70-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	2000 mg/kg
<i>Oral</i>		
LD50	Rat	2790 mg/kg
MENTHONE LAEVO (CAS 89-80-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	500 mg/kg
<i>Other</i>		
LD50	Mouse	2180 mg/kg

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 11 of 17

Version # 01

Print Date: 01-06-2016

Components	Species	Test Results
methyl 2,2-dimethyl- 6-methylenecyclohexane carboxylate (CAS 81752-87-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
PINENE ALPHA (CAS 80-56-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	3700 mg/kg Remarks: Brain and Coverings:Recordings from specific areas of CNS. Behavioral:Somnolence (general depressed activity). Lungs, Thorax, or Respiration:Other changes.
THYMOL (CAS 89-83-8)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	980 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

#### Carcinogenicity

##### ACGIH Carcinogens

CAMPHOR (CAS 76-22-2)

A4 Not classifiable as a human carcinogen.

PINENE ALPHA (CAS 80-56-8)

A4 Not classifiable as a human carcinogen.

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

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	May cause damage to organs.

# SAFETY DATA SHEET

## 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 12 of 17

Version # 01

Print Date: 01-06-2016

<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.
<b>Further information</b>	This mixture has not been subjected to toxicological testing as an entity. According to available data on the constituents the health classification criteria are met.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Toxic to aquatic life with long lasting effects. This mixture has not been subjected to ecotoxicological testing as an entity. According to available data on the constituents the environmental classification criteria are met.

Components	Species		Test Results
<b>(2S)-PROPYL 2- (1,1-DIMETHYLPROPOXY) PROPANOATE (CAS 319002-92-1)</b>			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Algae	> 100 mg/l OECD 201
Crustacea	EC50	Daphnia	20 mg/l OECD 202
Fish	LC50	Fish	13 mg/l OECD 203
<b>1-Propanol, 2-[1-(3,3-dimethylcyclohexyl) ethoxy]-2-methyl-,propanoate (CAS 141773-73-1)</b>			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Algae	> 1.1 mg/l, 72 hours (OECD 201)
Crustacea	EC50	Daphnia magna	3.3 mg/l, 48 hours (OECD 202)
Fish	LC50	Fish	3.6 mg/l, 96 hours (OECD 203)
<b>2,4-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE (CAS 68039-49-6)</b>			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Green algae (Desmodesmus subspicatus)	31 mg/l, 72 hours (based on growth rate - nominal concentration - OECD 201)
Crustacea	EC50	Daphnia magna	22.4 mg/l, 48 hours (measured concentration - similar to OECD 202)
Fish	LC50	Oncorhynchus mykiss (reported as Salmo gairdneri)	7.5 mg/l, 96 hours (measured concentration - OECD 203)
<b>4-CYCLOHEXYL-2- METHYLBUTAN-2-OL (CAS 83926-73-2)</b>			
<b>Aquatic</b>			
Algae	EC50	Algae	25 mg/l, 72 hours
Crustacea	EC50	Daphnia	3.8 mg/l, 48 hours
Fish	LC50	Fish	13 mg/l, 96 hours

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 13 of 17

Version # 01

Print Date: 01-06-2016

Components	Species	Test Results
<b>BICYCLO 2.2.1 HEPTAN-2-OL, 1,7,7-TRIMETHYL-, (1S-ENDO)- (CAS 464-45-9)</b>		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 55.4 - 62.8 mg/l, 96 hours
<b>CAMPHOR (CAS 76-22-2)</b>		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	EC50	<i>Pimephales promelas</i> 110 mg/l, 96 hours
<b>CYMENE PARA (CAS 99-87-6)</b>		
Other	EC50	<i>Pseudokirchnerella subcapitata</i> 5.8 mg/l, 72 hours
<b>Aquatic</b>		
Crustacea	LC50	Water flea ( <i>Daphnia magna</i> ) 4.3 - 10 mg/l, 48 hours
Fish	LC50	Fish 2 mg/l, 96 hours ( <i>Oryzias latipes</i> )
		Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) 36 - 64 mg/l, 96 hours
	NOEC	Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) 10 mg/l, 96 hours
<b>EUCALYPTOL (CAS 470-82-6)</b>		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 95.4 - 109 mg/l, 96 hours
<b>HYDROGENATED METHYL ROSINATE (CAS 8050-15-5)</b>		
<i>Acute</i>		
Other	EL50	<i>Selenastrum capricornutum</i> (new name) > 1000 mg/l, 72 hours OECD 201 <i>Pseudokirchnerella subca</i>
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EL50	<i>Daphnia magna</i> > 100 mg/l, 48 hours OECD 202
Fish	LL50	<i>Pimephales promelas</i> > 1000 mg/l, 96 hours OECD 203
<b>LINALOOL (CAS 78-70-6)</b>		
Other	EC10	Activated sludge of a predominantly domestic sewage > 100 mg/l, 3 hours
<b>Aquatic</b>		
Algae	EC50	Green algae ( <i>Chlamydomonas variabilis</i> ) 88.3 mg/l, 96 hours DIN 38412 Part 9 static. The details of the toxic effect related to the nominal concentration.
Crustacea	EC50	<i>Daphnia magna</i> 20 mg/l, 48 hours DIN 38412 Part 11 static. The details of the toxic effect related to the nominal concentration.

## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 14 of 17

Version # 01

Print Date: 01-06-2016

Components		Species	Test Results
Fish	LC50	Ide, silver or golden orfe (Leuciscus idus)	22 - 46 mg/l, 96 hours DIN 38412 Part 15 static. The details of the toxic effect related to the nominal concentration.
	LC50-R	Fish	27.8 mg/l, 96 hours
methyl 2,2-dimethyl- 6-methylenecyclohexane carboxylate (CAS 81752-87-6)			
<b>Aquatic</b>			
Other	EC50	Activated Sludge	900 mg/l, 3 hours inhibitory test
<i>Acute</i>			
Algae	EC50	Algae	> 0.63 mg/l, 72 hours
Crustacea	EC50	Daphnia magna	> 2 mg/l, 48 hours
Fish	LC50	Fish	> 1.5 mg/l, 96 hours
PINENE ALPHA (CAS 80-56-8)			
<b>Aquatic</b>			
Crustacea	LC50	Daphnia magna	41 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.28 mg/l, 96 hours
THYMOL (CAS 89-83-8)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	3.2 mg/l, 96 hours

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

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

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

CYMENE PARA	4.1
EUCALYPTOL	2.74
LINALOOL	2.97, (OECD Guideline 107)
PINENE ALPHA	4.83
THYMOL	3.3

**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

<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.



## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 15 of 17

Version # 01

Print Date: 01-06-2016

**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.

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#### 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.

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#### 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 - Yes  
Pressure Hazard - No  
Reactivity Hazard - No



# SAFETY DATA SHEET

## 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 16 of 17

Version # 01

Print Date: 01-06-2016

### 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 - Minnesota Haz Subs: Hazardous substance

CAMPHOR (CAS 76-22-2)

Hazardous substance.

#### US. Massachusetts RTK - Substance List

CAMPHOR (CAS 76-22-2)

CYMENE PARA (CAS 99-87-6)

PINENE ALPHA (CAS 80-56-8)

#### US. New Jersey Worker and Community Right-to-Know Act

CAMPHOR (CAS 76-22-2)

CYMENE PARA (CAS 99-87-6)

PINENE ALPHA (CAS 80-56-8)

#### US. Pennsylvania Worker and Community Right-to-Know Law

CAMPHOR (CAS 76-22-2)

CYMENE PARA (CAS 99-87-6)

PINENE ALPHA (CAS 80-56-8)

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

### International Inventories

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





## SAFETY DATA SHEET

### 507294 SARRIETTE BASE (199618 D)

Revision Date: 01-06-2016

Page 17 of 17

Version # 01

Print Date: 01-06-2016

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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	01-06-2016
Revision date	01-06-2016
Version #	01
HMIS® ratings	Health: 3* Flammability: 2 Physical hazard: 0

#### Disclaimer

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