

# Safety Data Sheet

Nerol



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## 1. Identification

<b>Product Description</b>	Nerol
<b>CAS #</b>	106-25-2
<b>FEMA Number</b>	2770
<b>True Terpenes Item #</b>	RM10023
<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>	True Terpenes (888) 954-8550 TrueTerpenes.com
<b>Emergency Contact</b>	Poison Control Helpline: 1 (800) 222-1222

## 2. Hazard(s) Identification



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## Physical Hazards

Not Classified

## Health Hazards

Acute toxicity, oral	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, long-term hazard	Category 2
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## Label Elements



## Signal Word

Warning

## Hazard Statement

May be harmful if swallowed. Causes skin irritation. Causes skin and eye irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

## Precautionary Statement

### Prevention

Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.

### Response

IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation



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	persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not Otherwise Classified (HNOC)</b>	None known.
<b>Supplemental Information</b>	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	Percent
NEROL	(2Z)-3,7-dimethylocta-2,6-dien-1-ol	106-25-2	100

### Additional Components

Chemical Name	Common Name and Synonyms	CAS Number	Percent
CITRONELLOL	3,7-DIMETHYL-6-OCTEN-1-OL 6-Octen-1-ol, 3,7-dimethyl- 2,6-dimethyl-2-octen-8-ol	106-22-9	0 - 0.2
GERANIOL	(2E)-3,7-Dimethyl-2,6-octadien-1-ol	106-24-1	0 - 0.2



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(2E)-3,7-dimethylocta-2,6-dien-1-ol  
LEMONOL  
GERANYL ALCOHOL

CITRAL	2,6-OCTADIENAL, 3,7-DIMETHYL- 2,6-dimethyloctadien-2,6-al-8 3,7-DIMETHYL-2,6-OCTADIENAL 3,7-dimethylocta-2,6-dienal	5392-40-5	0 - 0.1
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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 /** Severe eye irritation. Symptoms may include stinging, tearing, redness,



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<b>Effects, Acute and Delayed</b>	swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of Immediate Medical Attentional and Special Treatment Needed</b>	Not available.
<b>General Advice</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.

## 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>Firefighting 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



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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. 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. Eliminate all sources of ignition.

### 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. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean



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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



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## Occupational Exposure Limits

### US. ACGIH Threshold Limit Values

Material	Type	Value	Form
CITRAL (CAS 5392-40-5)	TWA	5 ppm	Inhalable fraction and vapor.

### Biological Limit Values

No biological exposure limits noted for the ingredient(s).

### Exposure Guidelines

- DNEL (Derived No-Effect Level): Workers - Long-term exposure  
Systemic effects – inhalation: 5.4 mg/m<sup>3</sup>  
Systemic effects – dermal: 0.76 mg/kg bw/day  
Local effects – dermal: 133 µg/cm<sup>2</sup>
- DNEL (Derived No-Effect Level): General population - Long-term exposure  
Systemic effects – inhalation: 1.3 mg/m<sup>3</sup>  
Systemic effects – dermal: 0.38 mg/kg bw/day  
Systemic effects – oral: 0.38 mg/kg bw/day
- PNEC (Predicted No-Effect Concentration) aqua (freshwater): 7.45 µg/L
- PNEC (Predicted No-Effect Concentration) aqua (marine water): 0.745 µg/L
- PNEC (Predicted No-Effect Concentration) Sewage Treatment Plant: 12.9 mg/L
- PNEC (Predicted No-Effect Concentration) sediment (freshwater): 133 µg/kg sediment dw
- PNEC (Predicted No-Effect Concentration) sediment (marine water): 13.3 µg/kg sediment dw
- PNEC (Predicted No-Effect Concentration) soil: 22.3 µg/kg soil dw
- PNEC (Predicted No-Effect Concentration) aqua (intermittent releases): 74.5 µg/L
- Additional information: This sheet is based on the current valid lists.

### 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.





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## 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.

### 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

### Appearance

Refer to Spec Sheet

### Physical State

Liquid

### Form

Liquid

### Color

Refer to Spec Sheet



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<b>Odor</b>	Characteristic
<b>Odor Threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting Point / Freezing Point</b>	< -4 °F (< -20 °C)
<b>Initial Boiling Point and Boiling Range</b>	433.4 °F (223 °C)
<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>	0.6 hPa at 20 °C 1.1 hPa at 30 °C 3.2 hPa at 50 °C
<b>Vapor Density</b>	5.3
<b>Relative Density</b>	0.88 at 20 °C
<b>Solubility(ies)</b>	



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<b>Solubility (water)</b>	Insoluble
<b>Partition Coefficient (n-octanol/water)</b>	log Kow = 2.76 (30°C)
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	4.5 mPa·s (40°C - shear rate 583 s <sup>-1</sup> ) (Dynamic) 6.39 mm <sup>2</sup> /s at 25 °C (Kinematic) 8.9 mPa·s (20°C - shear rate 583 s <sup>-1</sup> ) (Dynamic)

## Other Information

<b>Explosive Properties</b>	Not explosive
<b>Flammability Class</b>	Combustible III B estimated
<b>Molecular Formula</b>	C <sub>10</sub> H <sub>18</sub> O
<b>Molecular Weight</b>	154.25 g/mol
<b>Oxidizing Properties</b>	Not oxidizing

## 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.



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<b>Possibility of Hazardous Reaction</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to Avoid</b>	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>	No adverse effects due to inhalation are expected.
<b>Skin Contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye Contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

<b>Symptoms Related to the Physical, Chemical and Toxicological Characteristics</b>	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.
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### Information on Toxicological Effects

<b>Acute Toxicity</b>	May be harmful if swallowed.
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<b>Product</b>	<b>Species</b>	<b>Test Results</b>
NEROL (CAS 106-25-2)		
<b>Acute</b>		
Dermal LD50	Rabbit	> 5000 mg/kg
Oral LD50	Rat	4500 mg/kg
<b>Additional Components</b>		
<b>Species</b>		
<b>Test Results</b>		
CITRAL (CAS 5392-40-5)		
<b>Acute</b>		
Dermal LD50	Rat	> 2000 mg/kg
Oral LD50	Rat	4950 mg/kg
CITRONELLOL (CAS 106-22-9)		
<b>Acute</b>		
Dermal LD50	Rabbit	2650 mg/kg
Oral LD50	Rat	3450 mg/kg
GERANIOL (CAS 106-24-1)		
<b>Acute</b>		
Dermal LD50	Rabbit	> 5000 mg/kg
Oral LD50	Rat	3600 mg/kg



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## **Skin Corrosion / Irritation**

Causes skin irritation.  
The substance is classified (skin irritation - category 2) as it was found irritant in a skin irritation study conducted in rabbits according to OECD Guideline No. 404.

## **Serious Eye Damage / Eye Irritation**

Causes serious eye irritation.  
The substance is classified (effects on the eye - category 2) as it was found irritant in an eye irritation study conducted in rabbits according to a method equivalent to OECD Guideline No. 405.

## **Respiratory or Skin Sensitization**

### **Respiratory Sensitization**

Not a respiratory sensitizer.

### **Skin Sensitization**

May cause an allergic skin reaction.  
Nerol is classified skin sensitizer category 1B as skin sensitisation effects were observed in the murine Local Lymph Node Assay (LLNA - OECD 429). The product may contain other skin sensitizers at trace levels: geraniol, citronellol and citral (max 0.2%, 0.2% and 0.1% respectively).

## **Germ Cell Mutagenicity**

Based on the results of the tests conducted with the substance, no genotoxic potential is expected:

- nerol was not mutagenic in bacteria in an Ames test (OECD 471);
- no effects were observed with the substance in an in vitro chromosome aberration test in human lymphocytes (OECD 473);
- the substance was not mutagenic in an in vitro gene mutation test in mouse lymphoma L5178Y cells (OECD 476).

## **Carcinogenicity**

The product is not expected to be carcinogenic: no mutagenic effects were observed with the substance and there is no evidence from the repeated dose toxicity study that the substance is able to induce hyperplasia or pre-neoplastic lesions.

## **IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.



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## **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

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

Not listed.

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

Not available.

## **Reproductive Toxicity**

The effects observed in a reproduction/developmental toxicity screening test conducted in rat according to OECD guideline No 422 (test combined with a repeated dose toxicity study) do not result in classification of nerol. No treatment-related effects were actually detected in mating performance, fertility and gestation length.

An increase in post-implantation losses was observed but it was associated with a reduced food consumption by gestating females and a decrease in their bodyweight gain.

A further study has been proposed within the context of REACH in order to confirm the non-classification of the substance.

NOAEL (No Observed Adverse Effect Level) - systemic toxicity for males and females (P) = 374 mg/kg bw/day.

NOAEL - reproduction toxicity = 720 mg/kg bw/day.

NOAEL - developmental toxicity = 374 mg/kg bw/day.

## **Specific Target Organ Toxicity - Single Exposure**

The substance is not classified according to the limited effects observed in LD50 determination studies.

## **Specific Target Organ Toxicity - Repeated Exposure**

The effects observed in a repeated dose toxicity study (28 days) do not result in classification of nerol.

This study - combined with a reproduction/developmental toxicity screening test - was conducted according to OECD guideline No 422.

Daily administration of the substance by diet for 42 days to male and unmated female rats was well tolerated at doses of 191.2 and 374 mg/kg bw/day.



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At 720 mg/kg bw/day a decrease in food consumption and bodyweight gain of animals was observed as well as microscopic abnormalities in liver and kidneys. However, kidney effects are not considered as relevant for humans.

NOAEL = 374 mg/kg bw/day (effects on liver).

## Aspiration Hazard

Although the substance is a low viscosity and mobile liquid, there is no evidence of aspiration toxicity for this material from either human experience or from animal toxicity data and it is not a member of a recognized category of materials having aspiration toxicity potential (i.e. hydrocarbons).

## 12. Ecological Information

### Ecotoxicity

Toxic to aquatic life with long lasting effects.

· Toxicity to aquatic microorganisms:

Sewage containing the substance can be treated by a municipal sewage treatment plant (taking into account the PNEC for sewage treatment plant given in section 8).

EC (3h) = 241 mg/L (respiration rate - nominal concentration - activated sludge - OECD 209).

### Product

NEROL (CAS 106-25-2)

### Species

### Test Results

### Acute

Algae EC50

Green algae (Pseudokirchneriella

9.54 mg/l, 72 hours





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subcapitata)

2.16 mg/l, 72 hours

### Aquatic

Acute

Crustacea EC50

Daphnia magna

32.4 mg/l, 48 hours

Fish LC50

Danio rerio

20.3 mg/l, 96 hours

### Additional Components

### Species

### Test Results

CITRAL (CAS 5392-40-5)

### Acute

Other EC20

Activated sludge of a predominantly domestic sewage

68 mg/l, 0.5 hours OECD Guideline 209 aquatic

### Aquatic

Other EC50

Bacterium

2100 mg/l, 0.5 hours DIN 38412 Part 27 (draft) aquatic - The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

### Acute

Algae EC50

Green algae (*Chlamydomonas variabilis*)

103.8 mg/l, 72 hours DIN 38412 Part 9 static - The product has low solubility in the test



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		medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.
Crustacea EC50	Daphnia magna	7 mg/l, 48 hours Directive 79/831/EEC static - The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.
Fish LC50	Ide, silver or golden orfe (Leuciscus idus)	> 4.6 - < 10 mg/l, 96 hours DIN 38415 Part 15 static - The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.
CITRONELLOL (CAS 106-22-9)		
<b>Aquatic</b>		
<b>Acute</b>		
Algae EC50	Algae	2.4 mg/l, 72 hours
Crustacea EC50	Daphnia	17 mg/l, 48 hours



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Fish LC50 Leuciscus idus (Golden orfe) > 10 - < 22 mg/l, 96 hours

GERANIOL (CAS 106-24-1)

Other EC50 Activated sludge of a predominantly domestic sewage 70 mg/l, 0.5 hours

### Aquatic

Algae EC50 Green algae (Desmodesmus subspicatus) 13.1 mg/l, 72 hours

Crustacea EC50 Daphnia magna 10.8 mg/l, 48 hours

Fish LC50 Danio rerio 22 mg/l, 96 hours

Fathead minnow (Pimephales promelas) > 2.7 - < 3.8 mg/l, 96 hours

### Persistence and Degradability

The substance is readily biodegradable. Biodegradation achieved in 28 days: 90% (oxygen consumption - assay conducted according to the OECD 301D guideline - activated sludge from a domestic waste water treatment plant - not adapted). Note: after 7 days, biodegradation was already higher than 60%. According to Annex XIII of REACH Regulation, the substance is not considered to be very Persistent and very Bioaccumulative.

### Biodegradability

Percent degradation (Aerobic biodegradation) GERANIOL  
> 90 % OECD 301A (new version)(aerobic), activated sludge, domestic DOC reduction, Readily biodegradable (according to OECD criteria)

### Bioaccumulative Potential

No measured data are available for the substance. Based on estimations



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using 3 different QSARs (Quantitative Structure-Activity Relationship methods) and on the value of the substance partition coefficient n-octanol/water ( $< 3$ ), an accumulation in organisms is not expected.

## 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

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.



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## 14. Transport Information

### ADN

UN Number	3082
UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROL)
Transport Hazard Class(es)	9
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	Yes
Labels Required	9

### ADR

UN Number	3082
UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROL)
Transport Hazard Class(es)	9
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	Yes



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Labels Required 9

### RID

UN Number 3082

UN Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROL)

Transport Hazard Class(es) 9

Subsidiary Class(es) -

Packing Group III

Environmental Hazards Yes

Labels Required 9

Special Precautions for User Read safety instructions, SDS and emergency procedures before handling.

### DOT BULK

UN Number 3082

UN Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROL)

Hazard Class(es) 9

Packing Group III

Environmental Hazards

Marine Pollutant Yes

Packaging Exceptions 155

Packaging Bulk 241



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Labels Required 9

### DOT NON-BULK

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

UN Number 3082

UN Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROL)

Transport Hazard Class(es) 9

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



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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.

### SARA 304 Emergency Release Notification

Not regulated.

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





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Not available.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

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

Not regulated.

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

**SARA 302 Extremely Hazardous Substance**

Not listed.

**SARA 311/312 Hazardous Chemical**

Yes

**Classified Hazard Categories**

Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
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.

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## Safe Drinking Water Act (SDWA)

Not regulated.

## US State Regulations

### California Proposition 65

#### 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)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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



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Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States and 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

<b>Issue Date</b>	11/01/2018
<b>Revision Date</b>	New Document
<b>Version #</b>	00
<b>HMIS® Ratings</b>	
<b>Health</b>	2
<b>Flammability</b>	1
<b>Physical Hazard</b>	0



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## Disclaimer

True Terpenes 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. True Terpenes 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 True Terpenes 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.

