

## SAFETY DATA SHEET

## 500655 LINALOOL OXIDE

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**1. IDENTIFICATION**

<b>Product Description:</b>	<b>LINALOOL OXIDE</b>
<b>CAS #</b>	1365-19-1
<b>FEMA Number</b>	3746
<b>Other means of identification</b>	
<b>Vigon Item #</b>	500655
<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>	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 5
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
<b>Environmental hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning
<b>Hazard statement</b>	
H227	Combustible liquid.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.
H315 + H320	Causes skin and eye irritation.
H319	Causes serious eye irritation.
<b>Precautionary statement</b>	
<b>Prevention</b>	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

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P280 Wear protective gloves/eye protection/face protection.

#### Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P321 Specific treatment (see this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P370 + P378 In case of fire: Use appropriate media to extinguish.

#### Storage

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

#### 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

#### Substances

Chemical name	Common name and synonyms	CAS number	%
LINALOOL OXIDE	linalool dihydroepoxide cis,trans-2-methyl-2-vinyl-5-(2-hydroxy-2-propyl) tetrahydrofuran 6-methyl-2-(oxiran-2-yl)hept-5-en-2-ol 2-(5-methyl-5-vinyltetrahydro-2-furanyl)-2-propanol	1365-19-1	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.



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**Most important symptoms/effects, acute and delayed** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**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.

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#### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media** Water spray, fog, CO<sub>2</sub>, dry chemical, or alcohol resistant foam.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical** Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions for firefighters** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

**Specific methods** Use water spray to cool unopened containers.

**General fire hazards** Static charges generated by emptying package in or near flammable vapor may cause flash fire.

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#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor.



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#### 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. Do not allow material to contaminate ground water system. 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.

#### Environmental precautions

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

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## 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.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Occupational exposure limits

No exposure limits noted for ingredient(s).

#### 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.

#### 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

When using do not smoke. 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.

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#### 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>	370.4 °F (188 °C)
<b>Flash point</b>	148.0 °F (64.4 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<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 kPa at 25 °C 0 mm Hg at 25 °C
<b>Vapor density</b>	5.9
<b>Relative density</b>	Not available.
<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>Flammability class</b>	Combustible IIIA estimated
<b>Molecular formula</b>	C10H18O2
<b>Molecular weight</b>	170.25 g/mol
<b>Specific gravity</b>	0.94 at 25 °C

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#### 10. STABILITY AND REACTIVITY

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

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<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.
<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>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	May be harmful in contact with skin. Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation. Causes mild eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

#### Information on toxicological effects

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

Product	Species	Test Results
LINALOOL OXIDE (CAS 1365-19-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	2500 mg/kg
<i>Oral</i>		
LD50	Rat	1150 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation. Species: rabbit Skin irritation
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation. Species: rabbit Mild eye irritation
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	Genotoxicity in vitro : Ames test negative Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
<b>Carcinogenicity</b>	



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#### 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>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.

### 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<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>	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.

### 14. TRANSPORT INFORMATION

#### ADN

Not regulated as dangerous goods.

#### ADR

Not regulated as dangerous goods.

#### RID

Not regulated as dangerous goods.

#### DOT

#### BULK

<b>UN number</b>	NA1993
<b>Proper shipping name</b>	COMBUSTIBLE LIQUID, N.O.S. (LINALOOL OXIDE)
<b>Hazard class</b>	Combustible liq

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Packing group	III
Environmental hazards	
Marine pollutant	No
Packaging exceptions	150
Packaging bulk	242
Labels required	3

**DOT****NON-BULK**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**DOT BULK****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)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - No
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No





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### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical**      Yes

**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. Massachusetts RTK - Substance List**

Not regulated.

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

Not listed.

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

Not listed.

**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)	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
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes



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Country(s) or region	Inventory name	On inventory (yes/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	11-26-2015
Revision date	11-21-2014
Version #	01
HMIS® ratings	Health: 2 Flammability: 2 Physical hazard: 0

#### Disclaimer

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.