

**SAFETY DATA SHEET****500925 NEROLIDOL**

Revision Date: 06-18-2015

Page 1 of 11

Version # 01

Print Date: 11-26-2015

**1. IDENTIFICATION**

<b>Product Description:</b>	<b>NEROLIDOL</b>
<b>CAS #</b>	7212-44-4
<b>FEMA Number</b>	2772
<b>Other means of identification</b>	
<b>Vigon Item #</b>	500925
<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>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 5
	Skin corrosion/irritation	Category 3
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

**Label elements****Signal word** Warning**Hazard statement**

H303	May be harmful if swallowed.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

## SAFETY DATA SHEET

### 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 2 of 11

Version # 01

Print Date: 11-26-2015

#### Precautionary statement

##### Prevention

P261 Avoid breathing mist or vapor.  
 P264 Wash thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P273 Avoid release to the environment.  
 P280 Wear eye/face protection.

##### Response

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 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.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P337 + P313 If eye irritation persists: Get medical advice/attention.  
 P391 Collect spillage.

##### Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 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

#### Substances

Chemical name	Common name and synonyms	CAS number	%
NEROLIDOL	3-Hydroxy-3,7,11-trimethyl-1,6,10-dodecatriene 3,7,11-TRIMETHYLDODECA-1,6,10-TRIEN-3-OL dodecatriene methyl vinyl homogeranyl carbinol	7212-44-4	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.



## SAFETY DATA SHEET

### 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 3 of 11

Version # 01

Print Date: 11-26-2015

<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. May cause respiratory irritation. Mild skin irritation.
<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.

#### 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.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	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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## SAFETY DATA SHEET

### 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 4 of 11

Version # 01

Print Date: 11-26-2015

#### 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

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.

## SAFETY DATA SHEET

### 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 5 of 11

Version # 01

Print Date: 11-26-2015

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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>	505.4 - 510.8 °F (263 - 266 °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 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 mm Hg at 25 °C (est)
<b>Vapor density</b>	7.7
<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 IIIB estimated
<b>Molecular formula</b>	C15H26O
<b>Molecular weight</b>	222.37 g/mol
<b>Specific gravity</b>	0.87 at 25 °C

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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.



# SAFETY DATA SHEET

## 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 6 of 11

Version # 01

Print Date: 11-26-2015

<b>Possibility of hazardous reactions</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>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes mild skin irritation.
<b>Eye contact</b>	Causes serious eye irritation. Causes mild eye irritation.
<b>Ingestion</b>	May be 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. Mild skin irritation. May cause respiratory irritation.

#### Information on toxicological effects

**Acute toxicity** In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. May be harmful if swallowed. May cause respiratory irritation.

Product	Species	Test Results
NEROLIDOL (CAS 7212-44-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2610 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes mild skin irritation. Skin Irritation: rabbit: non-irritant (OECD Guideline 404)
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation. Eye irritation: rabbit: non-irritant (OECD Guideline 405)
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	Sensitization: Freund's complete adjuvant test (FCA)/guinea pig: Non-sensitizing
<b>Germ cell mutagenicity</b>	The substance was not mutagenic in bacteria.

#### Carcinogenicity

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

Not listed.

# SAFETY DATA SHEET

## 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 7 of 11

Version # 01

Print Date: 11-26-2015

<b>Reproductive toxicity</b>	Genetic toxicity: The substance was not mutagenic in bacteria.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Further information</b>	Irritation rat: /7 h(IRT) No mortality within the stated exposition time as shown in animal studies.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
NEROLIDOL (CAS 7212-44-4)		
Other	EC20 Activated sludge, industrial	180 mg/l, 0.5 hours OECD Guideline 209 aerobic
<b>Aquatic</b>		
Algae	EC50 Green algae (Desmodesmus subspicatus)	2 mg/l, 72 hours
	NOEC Green algae (Desmodesmus subspicatus)	0.44 mg/l, 72 hours
Crustacea	EC50 Daphnia magna	0.51 mg/l, 48 hours Directive 79/831/EEC. The details of the toxic effect relate to the nominal concentration
Fish	LC50 Fathead minnow (Pimephales promelas)	1.3 - 1.58 mg/l, 96 hours The details of the toxic effect relate to the nominal concentration
	NOEC Fathead minnow (Pimephales promelas)	0.64 mg/l, 96 hours

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

**Persistence and degradability** Biodegradation:  
Test method: OECD 301F; ISO 9408; 92/69/EEC, C.4-D (aerobic), activated sludge, domestic  
Method of analysis: BOD of the ThOD  
Degree of elimination: 70 - 80% (28 d)  
Evaluation: Readily biodegradable (according to OECD criteria)

Bioaccumulation:  
Accumulation in organisms is expected

**Bioaccumulative potential** No data available.

**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.

## SAFETY DATA SHEET

500925 NEROLIDOL

Revision Date: 06-18-2015

Page 8 of 11

Version # 01

Print Date: 11-26-2015

### 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

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROLIDOL)
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. (NEROLIDOL)
Transport hazard class(es)	9
Subsidiary class(es)	-
Packing group	III
Environmental hazards	Yes
Labels required	9

#### RID

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROLIDOL)
Transport hazard class(es)	9
Subsidiary class(es)	-
Packing group	III
Environmental hazards	Yes
Labels required	9

#### DOT

#### BULK

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NEROLIDOL)
Hazard class	9
Packing group	III



## SAFETY DATA SHEET

500925 NEROLIDOL

Revision Date: 06-18-2015

Page 9 of 11

Version # 01

Print Date: 11-26-2015

**Environmental hazards**

Marine pollutant	Yes
Packaging exceptions	155
Packaging bulk	241
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. (NEROLIDOL)
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



Marine pollutant





## SAFETY DATA SHEET

500925 NEROLIDOL

Revision Date: 06-18-2015

Page 10 of 11

Version # 01

Print Date: 11-26-2015

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

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**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**



# SAFETY DATA SHEET

## 500925 NEROLIDOL

Revision Date: 06-18-2015

Page 11 of 11

Version # 01

Print Date: 11-26-2015

### 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
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	06-18-2015
Version #	01
HMIS® ratings	Health: 2 Flammability: 1 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.