Product Specification



Product Name: LIME TERPENES

Vigon Code: 507201

CAS Number: MIXTURE FEMA Number: N/A

<u>Characteristic:</u> <u>Specification:</u>

Gas Chromatograph PASSES TEST

Optical Rotation (@25c) 55.00 65.00

Odor CHARACTERISTIC LIME ODOR.

Refractive Index (@20c) 1.4720 1.4780 Specific Gravity (@25c) 0.8440 0.8500

Color/appearance COLORLESS TO PALE YELLOW LIQUID.

Additional Product Information:

Flash Point: 118 °F Shelf Life: 36 Months

Storage Conditions: Stable when stored in its original package, tightly sealed in a cool (46-90°F) and dry

location out of direct heat and light.

Effective Date: April 17, 2015

Printed Date: February 29, 2024



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1. IDENTIFICATION

Product Description: LIME TERPENES

CAS # MIXTURE

Other means of identification

Vigon Item # 507201

Recommended use Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance

compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

Recommended restrictions For Manufacturing Use Only

<u>Company</u> <u>24 Hour Emergency Response Information</u>

Vigon International, Inc. INFOTRAC (ACCT# 78928);

127 Airport Road 1-800-535-5053 WITHIN THE U.S.A. 1-352-323-3500 OUTSIDE THE U.S.A.

E. Stroudsburg, PA 18301

For information call: 570-476-6300

Web Site: www.vigon.com

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Vigon International, Inc.

Address 127 Airport Road

E. Stroudsburg, PA 18301

United States

Telephone For information call: 570-476-6300

Website www.vigon.com

E-mail regulatory@vigon.com

Emergency phone number INFOTRAC (ACCT# 78928);

1-800-535-5053 WITHIN THE U.S.A. 1-352-323-3500 OUTSIDE THE U.S.A.

2. HAZARD(S) IDENTIFICATION

Physical hazards Flammable liquids Category 3

Health hazards Skin corrosion/irritation Category 2

Sensitization, skin Category 1
Reproductive toxicity Category 2

Aspiration hazard Category 1

Environmental hazards Hazardous to the aquatic environment, Category 2

long-term hazard

Label elements



Signal word Danger



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H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.

P303 + P361 +

P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P308 + P313 IF exposed or concerned: Get medical advice/attention.
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.

P391 Collect spillage.

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	%	
LIME TERPENES		MIXTURE	100	



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Additional components

Chemical name	Common name and synonyms	CAS number	%	
CARVENE	DIPENTENE (+)-P-MENTHA-1,8-DIENE (R)-(+)-Limonene (R)-4-Isopropenyl-1-methyl-1-cyclohexen e 1- methyl-4-prop-1-en-2-ylcyclohexene	5989-27-5	55 - 70	
TERPINENE GAMMA	4-iso propyl-4-methyl-1,4-cyclohexadiene p-Mentha-1,4-diene 1,4-p-Menthadiene 1-METHYL-4-(1-METHYLETHYL)- 1,4-CYCLOHEXADIENE	99-85-4	5 - 15	
TERPINOLENE	cyclohexene, 1-methyl-4-(1-methylethylidene)- 1-METHYL-4-PROPAN-2-YLIDENE CYCLOHEXENE p- menth-1,4,8-diene P- METH-1-EN-8-YL-FORMATE 4-iso propylidene-1-methyl cylohexene	586-62-9	5 - 11	
CYMENE PARA			2 - 4	
PINENE BETA	7,7-dimethyl-4-methylidenebicyclo[3.1.1] heptane (1)-6,6- dimethyl-2-methylene bicyclo(3.1.1) heptane	127-91-3	1 - 4	
TERPINENE ALPHA	terpilene p-Mentha-1,3-diene 1- methyl-4-propan-2-ylcyclohexa-1,3-diene 4-iso-propyl-1-methyl-1,3-cyclohexadiene	99-86-5	1 - 4	
MYRCENE	3-METHYLENE-7-METHYL - 1,6-OCTADIENE 2-METHYL-6-METHYLENE - 2,7-OCTADIENE 7-Methyl-3-methyleneocta-1,6-diene 1,6-Octadiene, 7-methyl-3-methylene-	123-35-3	1 - 3	
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	1 - 3	



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Additional components

Chemical name	Common name and synonyms	CAS number	%
CINEOLE-1,4	1-iso propyl-4-methyl-7-oxabicyclo(2.2.1)hepta ne 4-methyl-1-propan-2-yl-7-oxabicyclo[2.2.1]h eptane 1,4-CINEOLE ISOCINEOLE	470-67-7	0.5 - 2
TERPINEOL ALPHA	2-(4- methyl-1-cyclohex-3-enyl)propan-2-ol dextro,laevo-alpha-terpineol 1-methyl-4-isopropyl-1-cyclohexen-8-ol P-MENTH-1-EN-8-OL	98-55-5	0.5 - 2
CAMPHENE	dextro,laevo-camphene 6,6- dimethyl-5-methylidenebicyclo [2.2.1]heptane 2,2-DIMETHYL-3-METHYLENE NORBORNANE 3,3-DIMETHYL-2-METHYLENE NORCAMPHANE	79-92-5	0 - 1
FENCHOL	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-trimethyl-3,3-Dimethyl-8,9-dinorbornan-2-ol 1,5,5- trimethylbicyclo[2.2.1]heptan-6-ol	1632-73-1	0 - 0.5
PHELLANDRENE ALPHA	2- methyl-5-propan-2-ylcyclohexa-1,3-diene 1,3- cyclohexadiene, 2-methyl-5-(1-methylethyl)- p- mentha-1,5-diene 1- methyl-4-isopropyl-1,5-cyclohexadiene 2- methyl-5-propan-2-ylcyclohexa-1,3-diene	99-83-2	0 - 0.5

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/effects, acute and

delayed

Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin

reaction. Dermatitis. Rash.



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Indication of immediate medical attention and special treatment

needed 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.

5. FIRE-FIGHTING MEASURES

Water spray, fog, CO2, dry chemical, or alcohol resistant foam. Suitable extinguishing media

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

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

Not available.

Firefighters must use standard protective equipment including flame retardant coat, helmet with Special protective equipment and precautions for firefighters 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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Methods and materials for

containment and cleaning up

Environmental precautions

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

Collect and dispose of spillage as indicated in section 13 of the SDS. Do not allow material to contaminate ground water system. Clean surface thoroughly to remove residual contamination.

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

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

Occupational exposure limits

US. ACGIH Threshold Limit Values

Additional components	Туре	Value	
PINENE ALPHA (CAS	TWA	20 ppm	
80-56-8)			



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US. ACGIH Threshold Limit Values

Additional components
Type
Value

PINENE BETA (CAS TWA 20 ppm
127-91-3)

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

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Avoid contact with eyes. Face shield is

recommended.

Skin protection

Hand protection Chemical resistant gloves.

Other Use of an impervious apron is recommended. Chemical resistant gloves.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Refer to Spec Sheet

Physical state Liquid.
Form Liquid.

Color Refer to Spec Sheet

Odor Characteristic.
Odor threshold Not available.

PH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling Not available.

range

Flash point 118.0 °F (47.8 °C) Closed Cup

Evaporation rate Not available.
Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower Not available.

(%)

Flammability limit - upper Not available.

(%)



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Explosive limit - lower (%)

Explosive limit - upper (%)

Vapor pressure

Vapor density

Relative density

Not available.

Not available.

Not available.

Solubility(ies)

Solubility (water) Insoluble

Partition coefficient

Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Explosive properties

Molecular formula

Oxidizing properties

Not explosive.

Not applicable

Not oxidizing.

Specific gravity

0.85 at 25 °C

10. STABILITY AND REACTIVITY

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

No hazardous decomposition products if stored and handled as indicated.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation No adverse effects due to inhalation are expected.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Direct contact with eyes may cause temporary irritation. Causes mild eye irritation.

Ingestion Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious

chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and

pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.



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LD50

Rabbit

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Toxicological data		
Additional components	Species	Test Results
TERPINOLENE (CAS 586-62-9)	·	
Acute		
Dermal		
LD50	Rat	> 5 ml/kg
Oral		
LD50	Rat	4390 mg/kg
TERPINENE GAMMA (CAS 99-85-	4)	
Acute		
Oral		
LD50	Rat	3650 mg/kg
CINEOLE-1,4 (CAS 470-67-7)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	3100 mg/kg
TERPINEOL ALPHA (CAS 98-55-5	<u>s</u>)	
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	3700 mg/kg
MYRCENE (CAS 123-35-3)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	> 11390 mg/kg
PINENE ALPHA (CAS 80-56-8)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
CYMENE PARA (CAS 99-87-6)		
Acute		
Dermal		

> 5000 mg/kg



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Additional components Species Test Results

TERPINENE ALPHA (CAS 99-86-5)

Acute

Oral

LD50 Rat 1680 mg/kg

CARVENE (CAS 5989-27-5)

Acute

Oral

LD50 Rat 4400 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

ACGIH sensitization

TURPENTINE AND SELECTED MONOTERPENES Dermal sensitization

(CAS 127-91-3)

TURPENTINE AND SELECTED MONOTERPENES

Dermal sensitization

(CAS 80-56-8)

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

CARVENE (CAS 5989-27-5) 3 Not classifiable as to carcinogenicity to humans.

MYRCENE (CAS 123-35-3) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity -

single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity -

repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic life with long lasting effects.



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Mobility in soil

No data available.

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Additional components		Species	Test Results
CAMPHENE (CAS 79-92-5))		
Aquatic			
Algae	EC50	Green algae (Desmodesmus subspicatus)	> 1000 mg/l, 72 hours Method: OECD Test Guideline 201
Crustacea	EC50	Daphnia magna	0.72 mg/l, 48 hours Method: OECD Tes Guideline 202
Fish	LC50	Danio rerio	0.72 mg/l, 96 hours Method: OECD Tes Guideline 203
Other	EC50	Activated Sludge	> 1000 mg/l, 3 hours Method: OECD Test Guideline 209
TERPINOLENE (CAS 586-	62-9)		
Aquatic			
Crustacea	LC50	Daphnia magna	2.55 mg/l, 48 h
Fish	LC50	Pimephales promelas	0.72 mg/l, 96 h
PINENE ALPHA (CAS 80-5	6-8)		
Aquatic			
Crustacea	LC50	Daphnia magna	41 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.28 mg/l, 96 hours
CYMENE PARA (CAS 99-8	7-6)		
Other	EC50	Pseudokirchnerella subcapitata	5.8 mg/l, 72 hours
Aquatic			
Crustacea	LC50	Water flea (Daphnia magna)	> 4.3 - < 10 mg/l, 48 hours
Fish	LC50	Fish	2 mg/l, 96 hours (Oryzias latipes)
		Sheepshead minnow (Cyprinodon variegatus)	> 36 - < 64 mg/l, 96 hours
	NOEC	Sheepshead minnow (Cyprinodon variegatus)	10 mg/l, 96 hours
CARVENE (CAS 5989-27-5)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 0.619 - < 0.796 mg/l, 96 hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	35 mg/l, 4 days
Other	EC50	Activated Sludge	3.94 mg/l
sistence and degradability	No data is a	vailable on the degradability of this product.	
accumulative potential	No data ava		
Ilih cin ooli	No data ava	ilahla	



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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 instructionsDo 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 regulationsDispose 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.

14. TRANSPORT INFORMATION

ADN

UN number 2319

Transport hazard class(es) 3
Subsidiary class(es) Packing group III
Environmental hazards Yes
Labels required 3

ADR

UN number 2319

UN proper shipping name TERPENE HYDROCARBONS, N.O.S. (LIME TERPENES)

Transport hazard class(es) 3
Subsidiary class(es) Packing group III
Environmental hazards Yes
Labels required 3

RID

UN number 2319

UN proper shipping name TERPENE HYDROCARBONS, N.O.S. (LIME TERPENES)

Transport hazard class(es) 3
Subsidiary class(es) Packing Group III
Environmental Hazards Yes
Labels required 3

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

DOT

BULK

UN number 2319

Proper shipping name TERPENE HYDROCARBONS, N.O.S. (LIME TERPENES)



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Hazard class 3
Packing group III

Environmental hazards

Marine pollutantYesPackaging exceptions150Packaging bulk242Labels required3

DOT

NON-BULK

Not regulated as dangerous goods.

IATA

UN number 2319

UN proper shipping name TERPENE HYDROCARBONS, N.O.S. (LIME TERPENES)

Transport hazard class(es) 3
Subsidiary class(es) Packing group III
Environmental hazards No
Labels required 3

IMDG

UN number 2319

UN proper shipping name TERPENE HYDROCARBONS, N.O.S. (LIME TERPENES)

Transport hazard class(es) 3
Subsidiary class(es) Packing group III
Environmental hazards

Marine pollutant Yes

Labels required 3

Transport in bulk according to Annex II of MARPOL

Not applicable.

73/78 and the IBC Code

ADN; ADR; DOT BULK; IATA; 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.

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Yes

chemical

Classified hazard Flammable (gases, aerosols, liquids, or solids)

categories Skin corrosion or irritation

Respiratory or skin sensitization

Reproductive toxicity Aspiration hazard

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

Not regulated.

(SDWA)



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US state regulations

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

MYRCENE (CAS 123-35-3) Listed: March 27, 2015

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.

(a))

MYRCENE (CAS 123-35-3)

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

11-18-2015 Issue date Revision date 09-21-2020

Version# 02

HMIS® ratings Health: 2*

> Flammability: 2 Physical hazard: 0

Disclaimer

Vigon International, Inc. 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. Vigon International, Inc. 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 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.

Revision information This document has undergone significant changes and should be reviewed in its entirety.



Date: February 28, 2024 דייט בּאָדָר א׳ תשפ״י Kof-K ID: K-0000507

Certificate ID: 2CMN3-FTJFK

Product Count: 1

Kosher Certificate



This certificate is valid through

12/31/2024

Vigon International, LLC 127 AIRPORT RD.

EAST STROUDSBURG, PA 18301 UNITED STATES

The following product(s) Manufactured By Vigon International, LLC are certified kosher with the listed restrictions.

Product Code	Product Name	Status	Restriction	UKD#
507201	LIME TERPENES	Parve	Kof-K symbol required 🔄	KFDAFDQRLOO



To verify or for the most up to date certificate please go to www.koshercertificate.com 201 The Plaza, Teaneck, NJ 07666 | Phone 201.837.0500 | fax 201.837.0126





This is to certify that the following product(s) have been produced under the supervision of the Islamic Food and Nutrition Council of America(IFANCA). The production facility as well as component ingredients have been reviewed and approved. The product(s) are in compliance with the halal requirements under Islamic laws.

Date: November 21, 2023

Document #: 6718.12506.II233462

Company Name & Address: Vigon International, LLC 127 Airport Road East Stroudsburg, Pennsylvania 18301 USA

Plant Name & Address: Vigon International, LLC 127 Airport Road East Stroudsburg, Pennsylvania 18301 USA

Product Name Product Code Halal-ID Product Certificate #

1. LIME TERPENES 507201 D22643 HC-23VINL55

Muhammad Munir Chaudry, Ph.D. President





This Certificate is valid until **January 31, 2025** and subject to renewal at that time.



Page 1 of 1

Food Grade Certification



Product Name: LIME TERPENES

Vigon Code: 507201

FEMA #: N/A

Vigon International, LLC. certifies that the above flavor or ingredient is Food Grade in accordance with at least one of the following recognized organizations:

FDA/FEMA GRAS (Flavor and Extract Manufacturers Assoc. Generally Recognized as Safe)

JECFA (Joint FAO/WHO Expert Committee on Food Additives)

CoE (Council of Europe)

FLAVIS (Assigned by EFSA – European Food Safety Authority)

As a US based company, we have included the FEMA Number on this certificate however, the remaining numbers can be provided upon request. We hereby certify that this flavor or ingredient is safe for its intended use in food.

Vigon International, LLC. may terminate this certification at any time upon written notice in which this certificate shall become null and void as to any material supplied after termination of this certification.

Sincerely,

US - Natural Status Certificate



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. certifies that the product listed above is declared *natural* and *meets* the criteria of Naturalness as defined in Section 101.22 (a) (3) of Title 21 of the United States Code of Federal Regulations.

Vigon International, LLC. certifies that the product meets the following criteria:

- Does not contain any artificial flavors
- Is not adulterated or misbranded according to Food and Drug laws

Vigon International, LLC. may terminate this certification at any time upon written notice, in which this certification shall be null and void as to any material supplied after termination of the certification.

Sincerely,

• azelis VIGO

Allergen/Sensitive Agents Identification Sheet

Product Name: LIME TERPENES

Vigon Code: 507201

* A check mark (indicates the Allergen/Sensitive Agent is present. If blank it means that there is no Allergen/Sensitive present.

ALLERGEN/SENSITIVE AGENTS	*
CORN & CORN PRODUCTS	
Includes modified starch, hydrolyzed protein,sweeteners,sugars, spice carriers	
EGG & EGG PRODUCTS	
liquid and powders	
FISH	
Includes any and all species of fresh and salt water fish	
GARLIC	
Dehydrated, powdered, granules, and flakes	
GLUTEN	
Wheat, rye, barley, oats, flour, etc.	
MILK & DAIRY PRODUCTS	
Includes whey, lactose, cheese, casein, spice carriers, milk, cream, etc.	
MONOSODIUM GLUTAMATE	
PEANUTS, PEANUT OIL & PEANUT DERIVED ITEMS	
Peanut meal, flour & ground nuts, szechwan sauce, mandelona nuts, etc.	
SESAME SEEDS & SESAME OIL	
CRUSTACEANS Shrimp, lobster, rock lobster, crab, crayfish, and products made from them	
MOLLUSKS	
Clams, mussels, oysters, scallops, and products made from them	
SOY	
Includes soya powder, protein, oil, lecithin, tofu	
SULFITES	
Includes sulfur dioxide, sodium dithionite, chemicals that lists sulfite, etc.	
TREE NUTS	
Includes almonds, beechnuts, bazil nuts, nutmeg, cashews, chestnuts, etc.	
WHEAT	
Includes hydrolyzed wheat protein, flour, gluten flour, starches	
MUSTARD & MUSTARD OIL	
LUPIN	
CELERY	
L	

Vigon International, LLC. follows Good Manufacturing Practices and has implemented HACCP systems. Our personnel are trained on the proper handling of allergenic materials.

Sincerely,

Organic Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. declares that the product listed above meets the requirements for nonagricultural (non-organic) substances allowed as ingredients in or on processed products labeled as "organic" or "made with organic (specified ingredients or food group(s))" [7 CFR 205.605(a)(9)].

All of the <u>flavor</u> constituents in the natural flavor product named above meet the FDA definition of a natural flavor.

No synthetic solvents were used.

This natural flavor product, including any solvents, carriers, preservatives or other processing aids used or contained therein, was produced and handled **without** the use of excluded (GMO) methods.

Ionizing radiation as described in 21 CFR 179.26 was **not** used in the processing of this natural flavor product.

This natural flavor product was <u>not</u> derived from products using sewage sludge in their agricultural production.

Sincerely,

GMO Status Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. declares that the product listed above is not derived from or produced using genetically modified organisms or their derivatives.

Sincerely,

Nutritional Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. certifies that, to the best of our knowledge, the product listed above does not contribute to the nutritional value of flavors due to their extremely low usage levels and therefore falls under the nutritional labeling exemption defined in Section 101.9(a) and (j) of Title 21 of the Code of Federal Regulations.

Sincerely,

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Irradiation and Sewage Sludge Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. declares that the product listed above has *not* been:

- a) Exposed to Ionizing Radiation
- b) Derived from Sewage Sludge
- c) Treated with Ethyl Oxide

Vigon International, LLC. may terminate this statement at any time upon written notice in which this statement shall be null and void as to any material supplied after termination of the statement.

Sincerely,

Heavy Metals and Pesticide Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. declares that, to the best of our knowledge and belief, all ingredients in the product listed above are listed as being generally recognized as safe (GRAS) by the Food and Drug administration (FDA) when used in accordance with the FDA's good manufacturing practices (GMP) and contain no residues of heavy metals and pesticides in excess of tolerances set by the FDA and the Environmental Protection Agency (EPA).

Sincerely,

Stabilizer Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. declares that, to the best of our knowledge that the product listed above has not been treated with BHT, BHA, Tocopherols or any other stabilizer.

Vigon International, LLC. may terminate this statement at any time upon written notice in which this statement shall be null and void as to any material supplied after termination of the statement.

Sincerely,

Continuing Product Guarantee



Product Name: LIME TERPENES

Vigon Code: 507201

In accordance with the regulations promulgated under the Federal Food, Drug, and Cosmetic Act, Vigon International, LLC. hereby provides continuing guarantee for the item listed above.

The article(s) comprising each shipment or other delivery hereafter made by Vigon International, LLC. is hereby guaranteed, as of the date of shipment or delivery, to be, on such date, not adulterated or misbranded within the meaning of the Federal Food, Drug, and Cosmetic Act, and not an article which may not, under the provisions of section 404, 505, or 512 of the act, be introduced into interstate commerce.

The guarantee herein given shall be a continuing guarantee and shall remain in full force and effect until revoked in writing by the undersigned. This guarantee shall not limit or preclude the operation and effect of any and all provisions of any agreement(s) under which the articles covered by this guarantee are sold, and the provisions of such agreement(s) shall govern in the event of any conflict or inconsistency herewith. Supplier's liability for breach of this guarantee shall in no event exceed the value of such of the articles of the supplier shipped to or on the order of Purchaser hereunder as may fail to comply with this guarantee.

This guarantee shall be void and of no effect in any instance where the particular use by Purchaser of any article to which this guarantee would otherwise apply is a use which is not in accordance with the requirements of the Federal Food, Drug and Cosmetic Act. Any and all prior guarantees and/or indemnity agreements heretofore given by supplier, are hereby revoked.

Sincerely,

Dietary Preferences & Restrictions



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. certifies that the product listed above is suitable for consumption by:

Vegans Do not eat meat, poultry, fish/seafood,eggs,dairy products, honey	•
Lacto-Vegetarians Do not eat meat, poultry, fish/seafood, eggs, but do eat dairy products	•
Ovo-Vegetarians Do not eat meat, poultry, fish/seafood, dairy products, but do eat eggs	~
Vegetarians Do not eat meat, poultry, fish/seafood, but do eat dairy products and eggs	•

Sincerely,

Animal Testing Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. is not in the practice of performing or commissioning animal testing on its finished products and actively evaluates the ingredients of its products through non-animal testing methods and through computational (predictive) toxicology programs.

Sincerely,

EU Declaration



Vigon Code: 507201

Product Name: LIME TERPENES

The product listed above is acceptable and/or approved for use in the European Union. Below is the flavoring status based on European Regulation 2008/1334/EC.

	Flavouring Preparation
	Natural Flavouring Substance
	Flavouring Substance
	Thermal Process Flavouring
	Smoke Flavouring
	Flavour Precursor
~	Other Flavouring
	Not Applicable: Contains no ingredients whose use is intended primarily for flavour.
	Not Permitted: Contains ingredient(s) which are not permitted in flavours in the EU.

Sincerely,

Printed: 02/29/24



NATURAL FLAVOR PRODUCT QUESTIONNAIRE - NATIONAL ORGANIC PROGRAM USE

The **USDA National Organic Program (NOP)** allows the use of certain natural (non-synthetic) substances, including flavors, in products labeled as "Organic" or "Made with Organic...(specified ingredients or food groups)" providing they comply with provisions established in the USDA NOP (7 CFR Part 205).

The NOP defines **Non-synthetic** (natural) in 7 CFR 205.2: a substance that is derived from mineral, plant or animal matter and does not undergo a synthetic process as defined in section 6502 (21) of the Act (7 U.S.C. 6502(21)). Under the terms of the Act, "**synthetic**" means a substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal or mineral sources, except that such term shall not apply to substances created by naturally occurring biological processes.

Non-synthetic Flavors authorized under the NOP, Section 205.605 (a)(9) must be from non-synthetic sources only and must not be produced using synthetic solvents, carrier systems or any artificial preservative.

In addition, Sections 205.105 (e)(f) respectively prohibit so-called "excluded" methods (GMOs) and ionizing radiation from being used to produce or during the handling of any ingredients or products under the NOP.

FDA Definition of Natural Flavors *FDA 21 CFR Part 101.22(a)(3)*: "...**natural flavor** or **natural flavoring** means the essential oil, oleoresin, essence or extractive, protein hydrolysate, distillate, or any product of roasting, heating or enzymolysis, which contains the flavoring constituents derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf or similar plant material, meat, seafood, poultry, eggs, dairy products, or fermentation products thereof, whose significant function in food is flavoring rather than nutritional. Natural flavors include [*but not exclusively*] the natural essences or extractives obtained from plants listed in §\$182.10, 182.20, 182.40, and 182.50 and part 184 of this chapter, and the substances listed in §172.510 of this chapter."

In order to approve the use of a natural flavor used in an "organic" or "made with" product, QAI requests the information below in order to determine compliance under the terms of the NOP. QAI may request additional information as needed.

Identification of Natural Flavor Product (Name/code): LIME TERPENES/507201

Supplier Name and Address: Vigon International, LLC. 127 Airport Road East Stroudsburg, PA 18301 USA

Type of flavor (select one or more as necessary):

Protein Hydrolysate	Extracts		Essential oil
Compounded flavor	Oleoresin		Isolate
Distillate	Compounded WONF	X	Other

Natural Flavor Product

A. Flavor constituents		
1.	Do all of the <u>flavor</u> constituents in the natural flavor product named above meet the <u>FDA definition of a natural flavor (see</u>	
	above)?	
	$\overline{\mathbf{X}}$ Yes \square No	
2.	Natural flavors authorized for use in NOP "organic" or "made with organic" products, in addition, must not be produced using	
	synthetic extraction solvents. Extraction may only use natural, non-petroleum based solvents. Is/are the natural flavor	

☐Yes ☐No ☐XN/A, no extraction solvents used

constituent(s) made using NOP-suitable extraction solvents?*

Printed: 02/29/24



> Please list any solvent(s) used in the production NONE	on of this Natural Flavor Product:	
	natural ethanol, super-critical carbon dioxide, authentic essential oil, and chlorinated, or halogenated solvents may be used. Propane, hexane, and	
B. Non-flavor constituents and other ingredients		
	r "made with organic" products must not contain any synthetic carrier ot limited to, propylene glycol, polyglycerol esters of fatty acids, mono- and	
> Please list any carrier system(s) used in this N	atural Flavor Product or attach an Ingredient Statement:	
	 XN/A, no carrier system(s) used Please list any preservative(s) used in this Natural Flavor Product or attach an Ingredient Statement: 	
> Please list any preservative(s) used in this Nat		
XN/A, no preservative(s) used		
with organic production. Such methods include, but are not limited to, recombinant DNA technology (including gene deletion, gene doubling, introduction of a foreign gene, and changing the positions of genes when achieved by recombinant DNA technology); therefore, GMO-plant extracts may not be used nor may natural flavors be the product of GMO-yeast fermentation. > This natural flavor product, including any solvents, carriers, preservatives or other processing aids used or contained therein, was produced and handled without the use of excluded (GMO) methods? X Yes		
limitations applicable to all (organic and non-organic) > Ionizing radiation as described in 21 CFR 17 ▼ No	food products. 9.26 was not used in the processing of this natural flavor product?	
Please	sign this questionnaire below	
Pursuant to 7CFR §205.605(a)(9) and §205.105(e)(f), I, of form is accurate and truthful to the best of my knowledge	on behalf of the supplier, hereby attest that the information provided in this	
Company Name: Vigon International LLC.		
Printed Name: Amanda Moyer Title	Manager of Regulatory	
Signature: Amanda Miyur Date	: 02/29/24	
V		

Nanomaterials



Product Name: LIME TERPENES

Vigon Code: 507201

We hereby confirm, to the best of our knowledge, that the above referenced product has not been formulated with engineered nanomaterials.

"Engineered nanomaterial" means any intentionally producted material that has one or more dimensions of the order of 100 nm or less or that is composed of discrete functional parts, either internally or at the surface, many of which have one or more dimensions of the order of 100 nm or less, including structures, agglomerates or aggregates, which may have a size above the order of 100nm but retain properties that are characteristic of the nanoscale.

Sincerely,

Transmissible Spongiform Encephalopathy (TSE) and Bovine • azelis Spongiform Encephalopathy (BSE) Statement





Product Name: LIME TERPENES

Vigon Code: 507201

Vigon International, LLC. products are manufactured wholly from synthetic, natural or manufactured materials and do not contain any raw materials produced from or substances derived of animal origin. Moreover, these products do not contain, and are not derived from, specified risk material as defined in Commission Decision 97/534/EC or mechanically recovered meat obtained from the vertebral column of bovine, ovine or caprine animals.

The manufacturing process does not use any ingredient of animal origin nor do our products come in contact with animal products during storage and transportation.

We further declare that our products are Dioxin Free.

Therefore, to the best of our knowledge the product listed above are free from Transmissible Spongiform Encephalopathy (TSE) and Bovine Spongiform Encephalopathy (BSE).

Vigon International, LLC. may terminate this statement at any time upon written notice, in which this statement shall be null and void as to any material supplied after termination of the statement.

Sincerely,

Vigon Regulatory Department regulatory@vigon.com

Date of Issue: February 29, 2024

Residual Solvents



Product Name: LIME TERPENES

Vigon Code: 507201

Based on our knowledge of our production process, raw materials and equipments used we do not expect residual solvents to be present.

Sincerely,

EU Fragrance Allergen Statement



Product Name: LIME TERPENES

Vigon Code: 507201

The product listed above contains the following substances listen in European Directive 76/768/EEC established by the SCCNFP declared allergens.

Limonene 68.43 Linalool 0.37

Sincerely,

Melamine Statement



Product Name: LIME TERPENES

Vigon Code: 507201

Based on our knowledge of our production process, raw materials and equipment used we do not expect melamine to be present.

Sincerely,

Phthalate Statement



Product Name: LIME TERPENES

Vigon Code: 507201

We've performed a risk assessment on our product contact plastics which include tubes, joints, caps, pumps, as well as packaging (e.g. plastic wraps and bags) and can confirm that our plastic products do not contain certain phthalate esters (most notably bis-2-Ethylhexyl phthalate[DEHP] and dibutyl phthalate [DBP]).

Sincerely,



Vigon International, LLC. +1.570.476.6300 | sales@vigon.com

Country of Origin:

USA

Chemical Name:

MIXTURE

118°F (48°C)

NONE Allergens: Liters:

0.000

LIME TERPENES CAS#: Flash Point:

Code: 507201

Approx. Gross:

ID #: EXAMPLE

LB KG

0.000 | Produced on: N/A 0.000

0.000 | Best used before: 0.000 N/A Approx. Tare:

Net: **EXAMPLE** 0.000 Lot #: 0.000

STORAGE CONDITIONS: Stable when stored in its original package, tightly sealed in a cool (46-90°F) and dry location out of direct heat and light.

INSTRUCTIONS FOR USE: Ask your employer for guidance regarding the safe use and handling of this product in your specific workplace environment based on the information provided in Vigon's Safety Data Sheet (SDS).

HAZARD STATEMENT: Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects PREC AUTIONARY STATEMENT: -PREVENTION- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.-RESPONSE- IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.-STORAGE- Store in a well-ventilated place. Keep cool. Store locked up.-DISPOSAL- Dispose of contents/container in accordance with local/regional/national/international regulations.



p,r,y