

501101 PINENE ALPHA NATURAL

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1. IDENTIFICATION			
Product Description:	PINENE ALPHA NATURAL	_	
CAS#	80-56-8		
FEMA Number	2902		
Other means of identification			
Vigon Item #	501101		
Recommended use		-	which may be used in flavor and fragrance EMA GRAS/FDA guidelines.
Recommended restrictions	For Manufacturing Use Onl	у	
<u>Company</u>		24 Hour Emerger	ncy Response Information
Vigon International, Inc.		INFOTRAC (ACC	
127 Airport Road			WITHIN THE U.S.A. OUTSIDE THE U.S.A.
E. Stroudsburg, PA 18301		1-352-323-3500 (OUTSIDE THE U.S.A.
For information call: 570-476-630	0		
Web Site: www.vigon.com			
Manufacturer/Importer/Supplier/D Manufacturer	istributor information		
Company name Address	Vigon International, Inc. 127 Airport Road E. Stroudsburg, PA 18301 United States		
Telephone	For information call:	570-476-6300	
Website	www.vigon.com		
E-mail	Not available.		
Emergency phone number		(ACCT# 78928)	
	1-800-535-5053 1-352-323-3500	WITHIN THE U	
2. HAZARD(S) IDENTIFICA	ATION		
Physical hazards	Flammable liquids		Category 3
Health hazards	Acute toxicity, oral		Category 5
	Skin corrosion/irritation		Category 2
	Serious eye damage/eye in	ritation	Category 2A
	Sensitization, skin		Category 1
	Aspiration hazard		Category 1
Environmental hazards	Hazardous to the aquatic en acute hazard	nvironment,	Category 1
	Hazardous to the aquatic en long-term hazard	nvironment,	Category 1



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Label elements	
Signal word	Danger
Hazard statement	Flammable liquid and vapor. May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes skin and eye irritation. May cause an allergic skin reaction. Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	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. 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 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 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 persists: 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.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	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	%
PINENE ALPHA	dextro,laevo-pin-2(3)-ene	80-56-8	100
	2,6,6 - trimethyl bicyclo-3,1,1-2-heptene		
	4,7,7- trimethylbicyclo[3.1.1]hept-3-ene		

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.



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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	

Most important symptoms/effects, acute and delayed

Indication of immediate medical attention and special treatment needed

General information

so that stomach vomit doesn't enter the lungs. Aspiration may cause pulmonary edema and pneumonitis. 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.

Not available.

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

General fire hazards	Static charges generated by emptying package in or near flammable vapor may cause flash fire.
Specific methods	Use water spray to cool unopened containers.
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.
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.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Suitable extinguishing media Unsuitable extinguishing media	Water spray, fog, CO2, dry chemical, or alcohol resistant foam. Do not use a solid water stream as it may scatter and spread 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.



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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. 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. 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 STOR	AGE
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

Hand protection

Occupational exposure limits **US. ACGIH Threshold Limit Values** Material Value Type **PINENE ALPHA (CAS** TWA 20 ppm 80-56-8) **Biological limit values** No biological exposure limits noted for the ingredient(s). Use explosion-proof ventilation equipment to stay below exposure limits. Good general ventilation Appropriate engineering controls (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Adequate ventilation should be provided so that exposure limits are not exceeded. Individual protection measures, such as personal protective equipment Wear safety glasses with side shields (or goggles). Face shield is recommended. Eye/face protection Skin protection

Chemical resistant gloves.



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Other	Use of an impervious apron is recommended.	
Respiratory protection	spiratory protection Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection is 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. 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.	
рН	Not available.	
Melting point/freezing point	-80.5 °F (-62.5 °C)	
Initial boiling point and boiling range	312.8 °F (156 °C) 101.325 kPa	
Flash point	90.0 °F (32.2 °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.	
Explosive limit - lower (%)	Not available.	
Explosive limit - upper (%)	Not available.	
Vapor pressure	22 - 24 mm Hg at 25 °C	
Vapor density	4.7	
Relative density	Not available.	
Solubility(ies)		
Solubility (water)	Insoluble	
Partition coefficient (n-octanol/water)	4.83	
Auto-ignition temperature	491 °F (255 °C)	
Decomposition temperature	Not available.	
Viscosity	Not available.	



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Oth	ner information		
	Density	0.86 g/cm3 estimated at 20 °C	
	Explosive properties	Not explosive.	
	Flammability class	Flammable IC estimated	
	Molecular formula	C10-H16	
	Molecular weight	136.24 g/mol	
	Oxidizing properties	Not oxidizing.	
	Specific gravity	0.86 at 25 °C	

10. STABILITY AND REACTIVITY

Reactivity	The 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 e	xposure			
Inhalation	Prolonged inhalation may be	Prolonged inhalation may be harmful.		
Skin contact	Causes skin irritation. May ca	Causes skin irritation. May cause an allergic skin reaction.		
Eye contact	Causes serious eye irritation.	Causes mild eye irritation.		
Ingestion	•	May be harmful if swallowed. 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	include stinging, tearing, redn	Aspiration may cause pulmonary edema and pneumonitis. 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.		
Information on toxicological effe	ects			
Acute toxicity	May be fatal if swallowed and enters airways.			
Product	Species	Test Results		
PINENE ALPHA (CAS 80-56-8)				
Acute				
Dermal				
LD50	Rabbit	> 5000 mg/kg		
Skin corrosion/irritation	Causes skin irritation.			
Serious eye damage/eye irritation	Causes serious eye irritation.			



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Respiratory or skin sensitization			
Respiratory sensitization		piratory sensitizer.	
Skin sensitization	May caus	se an allergic skin reaction.	
Germ cell mutagenicity		available to indicate product or any components c or genotoxic.	present at greater than 0.1% are
Carcinogenicity			
IARC Monographs. Overall	Evaluation of	Carcinogenicity	
Not listed.			
OSHA Specifically Regulate	ed Substance	s (29 CFR 1910.1001-1052)	
Not regulated.			
US. National Toxicology Pro	ogram (NTP)	Report on Carcinogens	
Not listed.	ulated Subst	ances (29 CFR 1910.1001-1050)	
Not available.		ances (29 CFR 1910.1001-1050)	
Reproductive toxicity	This proc	luct is not expected to cause reproductive or de	evelopmental effects.
Specific target organ toxicity - single exposure	Not class		
Specific target organ toxicity -	Not class	ified.	
repeated exposure			
Aspiration hazard	May be fa	atal if swallowed and enters airways.	
Chronic effects	Prolonge	d inhalation may be harmful.	
12. ECOLOGICAL INFOR	MATION		
Ecotoxicity	Very toxi	c to aquatic life with long lasting effects.	
Product		Species	Test Results
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
Persistence and degradability	-	dability Biotic/Aerobic Readily biodegradable.	

Bioaccumulative potential

Partition coefficient n-octano 4.83	l / water (log Kow)
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.



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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.

14. TRANSPORT INFORMATION

ADN

AD	N	
	UN number	2368
	UN proper shipping name	alpha-PINENE
	Transport hazard class(es)	3
	Subsidiary class(es)	-
	Packing group	III
	Environmental hazards	Yes
	Labels required	3
AD	R	
	UN number	2368
	UN proper shipping name	alpha-PINENE
	Transport hazard class(es)	3
	Subsidiary class(es)	-
	Packing group	III
	Environmental hazards	Yes
	Labels required	3
RID)	
	UN number	2368
	UN proper shipping name	alpha-PINENE
	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.
DO	Т	
BU	LK	
	UN number	2368
	Proper shipping name	alpha-Pinene
	Hazard class	3
	Packing group	III



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Environmental hazards Marine pollutant Packaging exceptions Packaging bulk	Yes 150 242
Labels required	3
DOT	
NON-BULK	
UN number	2368
Proper shipping name	alpha-Pinene
Hazard class	3
Packing group	111
Environmental hazards	
Marine pollutant	No
Packaging exceptions	150
Packaging non bulk	203
Labels required	3
ΙΑΤΑ	
UN number	2368
UN proper shipping name	alpha-Pinene
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	III
Environmental hazards	No
Labels required	3
IMDG	
UN number	2368
UN proper shipping name	alpha-PINENE
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	111
Environmental hazards	
Marine pollutant	Yes
Labels required	3
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.



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ADN; ADR; DOT BULK; DOT NON-BULK; IATA; IMDG; RID



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 Substar	nce List (40 CFR 302.4)
Not listed.	
SARA 304 Emergency releas	e notification
Not regulated.	
US. OSHA Specifically Regul	ated Substances (29 CFR 1910.1001-1050)
Not available.	
OSHA Specifically Regulated	Substances (29 CFR 1910.1001-1052)
Not regulated.	
TSCA Section 12(b) Export N	lotification (40 CFR 707, Subpt. D)
Not regulated.	
Superfund Amendments and Rea	uthorization Act of 1986 (SARA)
SARA 302 Extremely hazard	ous substance
Not listed.	
SARA 311/312 Hazardous	Yes
chemical	
Classified hazard	Flammable (gases, aerosols, liquids, or solids)
categories	Acute toxicity (any route of exposure)
	Skin corrosion or irritation Serious eye damage or eye irritation
	Respiratory or skin sensitization
	Aspiration hazard
	Hazard not otherwise classified (HNOC)



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SARA 313 (TRI reporting) Not regulated.		
ther federal regulations		
Clean Air Act (CAA) Section 1	12 Hazardous Air Pollutants (HAPs) List	
Not regulated.		
Clean Air Act (CAA) Section 1	12(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	
S state regulations California Proposition 65		
California Proposition 65	- Carcinogens & Reproductive Toxicity (CRT): Listed substance	
Not listed.		
ternational 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
	Taiwan Toxic Chemical Substances (TCS)	Yes
Taiwan	Talwart Toxic Chemical Substances (TCS)	163

*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	06-04-2014
Revision date	01-09-2018
Version #	06
HMIS® ratings	Health: 2*
	Flammability: 3
	Physical hazard: 0



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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.