

Creation Date 17-Dec-2009

Revision Date 09-May-2011

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Description: (1S)-(-)-alpha-Pinene
Cat No. 131270000; 131270050; 131272500; 131275000
Synonyms None.

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
 Janssen Pharmaceuticaaan 3a
 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
 CHEMTREC Phone Number, Europe: 001-703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Aspiration Toxicity	Category 1
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Chronic aquatic toxicity	Category 2
Flammable liquids.	Category 3

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R phrases mentioned in this Section, see Section 16

Symbol(s) Xn - Harmful
 N - Dangerous for the environment
R - phrase(s) R10 - Flammable
 R20 - Harmful by inhalation
 R43 - May cause sensitization by skin contact
 R65 - Harmful: may cause lung damage if swallowed
 R36/38 - Irritating to eyes and skin
Risk Combination Phrases R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H319 - Causes serious eye irritation
H315 - Causes skin irritation
H411 - Toxic to aquatic life with long lasting effects
H304 - May be fatal if swallowed and enters airways
H332 - Harmful if inhaled
H317 - May cause an allergic skin reaction
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P331 - Do NOT induce vomiting
P273 - Avoid release to the environment
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

Other Hazards

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (1S)- 7785-26-4	EEC No. 232-077-3	>95	7785-26-4	R10 Xn; R20 Xi; R36/38 R43 N; R51-53 Xn; R65;	Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Acute Tox. 4 (H332) Aquatic Chronic 2 (H411)	-
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For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes Immediate medical attention is required

Ingestion

Do not induce vomiting Call a physician or Poison Control Center immediately

Inhalation

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device Immediate medical attention is required

Notes to Physician

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam Cool closed containers exposed to fire with water spray

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Flammable Containers may explode when heated Vapors may form explosive mixtures with air Vapors may travel to source of ignition and flash back

Advice for fire-fighters

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As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear Thermal decomposition can lead to release of irritating gases and vapors

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental precautions

Should not be released into the environment.

Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood Wear personal protective equipment Keep away from open flames, hot surfaces and sources of ignition Use only non-sparking tools Use explosion-proof equipment Do not breathe vapors or spray mist Do not get in eyes, on skin, or on clothing Do not ingest Take precautionary measures against static discharges

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place Keep away from heat and sources of ignition Flammables area

Specific End Uses

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Use only under a chemical fume hood Ensure that eyewash stations and safety showers are close to the workstation location Use explosion-proof electrical/ventilating/lighting/equipment

Personal protective equipment

Eye Protection

Safety glasses with side-shields

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colorless
odor	odorless
pH	No information available.
Vapor Pressure	5 hPa @ 25 °C
Vapor Density	4.70
Boiling Point/Range	155 - 156°C / 311 - 312.8°F @ 760 mmHg
Melting Point/Range	-64 - 0.00°C / -83.2 - 32°F
Flash Point	33°C / 91.4°F
Method	Closed cup
Autoignition Temperature	255°C / 491°F
Explosion Limits	
Lower	0.8 vol%
Upper	6 vol%
Water Solubility	Insoluble
Specific Gravity	0.860
Molecular Formula	C ₁₀ H ₁₆
Molecular Weight	136.24

10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions .

None under normal processing..

Conditions to Avoid

Incompatible products, Heat, flames and sparks.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

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11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component

Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (1S)-

LD50 Oral	LD50 Dermal	LC50 Inhalation
LD50 = 3.7 g/kg (rat)	LD50 > 5 g/kg (rabbit)	LC50 = 625 mg/L/min (rat)

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Sensitization

May cause sensitization by skin contact

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

Respiratory system Eyes Skin

Other Adverse Effects

See actual entry in RTECS for complete information

Endocrine Disruptor Information

None known

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects

Do not empty into drains Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Component	log Pow
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (1S)-	4.83

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	UN2368
Hazard Class	3
Packing Group	III
Proper Shipping Name	alpha-PINENE

ADR

UN-No	UN2368
Hazard Class	3
Packing Group	III
Proper Shipping Name	alpha-PINENE

IATA

UN-No	UN2368
Hazard Class	3
Packing Group	III
Proper Shipping Name	alpha-PINENE

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (1S)-	232-077-3	-		X	X	-	X	X	X	X	KE-34429 X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory Lists

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

(1S)-(-)-alpha-Pinene**Revision Date 09-May-2011****CHINA** - China Inventory of Existing Chemical Substances**AICS** - Inventory of Chemical Substances**KECL** - Existing and Evaluated Chemical Substances**Chemical Safety Assessment****16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R10 - Flammable

R20 - Harmful by inhalation

R43 - May cause sensitization by skin contact

R65 - Harmful: may cause lung damage if swallowed

R36/38 - Irritating to eyes and skin

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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Revision Summary

Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**Disclaimer**

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End of Safety Data Sheet