

According to the UN GHS revision 8

Creation Date: April 24, 2026

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1. IDENTIFICATION

1.1 GHS Product identifier

Product name: (-)- α -Pinene

Catalog Number: TN1202

CAS Number: 7785-26-4

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses:

1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Flammable liquids, Category 3

Acute toxicity - Category 4, Oral

Aspiration hazard, Category 1

Skin irritation, Category 2

Skin sensitization, Category 1

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word:

Danger

Hazard statement(s):

H226 Flammable liquid and vapour

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s):

Prevention:

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

P233 Keep container tightly closed.

Response:

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.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
 P264 Wash ... thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
 P370+P378 In case of fire: Use ... to extinguish.
 P301+P317 IF SWALLOWED: Get medical help.
 P330 Rinse mouth.
 P301+P316 IF SWALLOWED: Get emergency medical help immediately.
 P331 Do NOT induce vomiting.
 P302+P352 IF ON SKIN: Wash with plenty of water/...
 P321 Specific treatment (see ... on this label).
 P332+P317 If skin irritation occurs: Get medical help.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P333+P317 If skin irritation or rash occurs: Get medical help.
 P391 Collect spillage.

Storage:

P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

Disposal:

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
(-)- α -Pinene	-	7785-26-4	232-077-3

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

A DRUG SCREENING EXPERT

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Turpentine, terpenes, and related compounds

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Foam, carbon dioxide, dry chemical

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Cover with an activated carbon adsorbent, take up and place in closed containers.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Keep container closed. Keep away from heat, sparks, and open flame.

Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Transparent
Odour	CHARACTERISTIC ODOR OF PINE
Melting point/freezing point	< -20 °C. Atm. press.:Ca. 1 018.3 hPa. Remarks:First determination.;< -20 °C. Atm. press.:Ca. 1 025.5 hPa. Remarks:Second determination.;< -20 °C. Remarks:Final value.
Boiling point or initial boiling point and boiling range	Ca. 155.5 °C. Atm. press.:Ca. 1 018.3 hPa. Remarks:First determination.;Ca. 155.2 °C. Atm. press.:Ca. 1 025.5 hPa. Remarks:Second determination.;Ca. 155 °C. Atm. press.:Ca. 101.3 kPa. Remarks:Corrected value with the Sydney Young equation.
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	31.3 °C. Atm. press.:Ca. 1 atm.
Auto-ignition temperature	Ca. 255 °C. Atm. press.:Ca. 979.6 hPa. Remarks:First cycle.;Ca. 255 °C. Remarks:Second cycle.;Ca. 257 °C. Atm. press.:Ca. 984 hPa. Remarks:Third cycle.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	dynamic viscosity (in mPa s) = Ca. 2.11. Temperature:20°C. Remarks:At a constant rate of 583.1 s-1. The test item was considered to be a Newtonian fluid.
Solubility	DMSO: 50 mg/mL (367.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
N-octanol-water partition coefficient	log Pow = 4.48. Temperature:37 °C. Remarks:Standard error: 0.06.
Vapour pressure	Ca. 567 Pa. Temperature:20°C. Remarks:First trial.;Ca. 679 Pa. Temperature:25°C. Remarks:First trial.; Ca. 558 Pa. Temperature:20°C. Remarks:Second trial.
Density and/or relative density	0.874 g/cm ³ at 25°C
Relative vapour density	4.7 (Air = 1)
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

Flammable liquid. A dangerous fire hazard when exposed to heat, flame, or oxidizing materials.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

As the nitrosyl percholate anhydride of nitrous and perchloric acids, it is a very powerful oxidant.

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 cut-off - rat (female) - > 500 mg/kg bw.

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - 0.303 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 0.475 mg/L - 48 h.

Toxicity to algae: NOEC - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 0.131 mg/L - 48 h.

Toxicity to microorganisms: NOEC - aerobic microorganisms - ca. 2 mg/L - 28 d.

12.2 Persistence and degradability

AEROBIC: Soil slurry samples taken from three different Georgia watersheds were found to readily degrade alpha-pinene under aerobic conditions, undergoing complete removal within 250 hours after a short lag period(1,2). The concentration of alpha-pinene in seawater samples decreased from 0.41 ng/L to 0.25 ng/L when incubated with macrophytes for 6 hrs at 10 deg C(3). The concentration of alpha-pinene in the influent to a kraft mill aerated stabilization basin with a 7-8 day retention time decreased from 0.20 ppm to 0.04 ppm(4). alpha-Pinene, present at 100 mg/L, reached 95% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(5).

12.3 Bioaccumulative potential

An estimated BCF of 1,040 was calculated in fish for alpha-pinene(SRC), using a log Kow of 4.83(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is very high(SRC),

provided the compound is not metabolized by the organism(SRC).

12.4 Mobility in soil

The Koc of alpha-pinene is estimated as 2,600(SRC), using a water solubility of 2.49 mg/L(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that alpha-pinene is expected to have slight mobility in soil.

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.

Korea Existing Chemicals List (KECL)

Listed.

16. OTHER INFORMATION**Information on revision****Creation Date** April 24, 2026**Revision Date** April 24, 2026**Abbreviations and acronyms**

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

ReferencesIPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=enCAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>**Other Information**

no data available

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