MATERIAL SAFETY DATA SHEET

Alpha Terpineol

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Identification of the substance Alpha Terpineol

Registration number
01-2119980717-23-0012

EC number
202-680-6

CAS number 98-55-5

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

Relevant identified uses:
Laboratory chemical
Laboratory and analytical use

Uses advised against:
Do not use for private purposes (household).
Food, drink and animal feedingstuffs.

1.3 Details of the supplier of the safety data sheet

COSMO CHEMISTRY

Office No. 713, Millennium Business Hub,

Sarthana Jakatnaka, Varachha Main Road,

Surat, Gujarat, India – 395006

Phone : +91 979797 7958
e-mail : info@cosmochemistry.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word Warning

Pictograms
GHS07

Hazard statements

H315 Causes skin irritation
H319 Causes serious eye irritation

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/eye protection

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Hazard pictogram(s):

Labelling of packages where the contents do not exceed 10 ml

Signal word: Not required

Hazard pictogram(s): Not required

Hazard statements: Not required

Precautionary statements: Not required

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties
Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance α-Terpineol

Molecular formula $C_{10}H_{18}O$

Molar mass 154,3 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Take off contaminated clothing.

Following inhalation
Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact
Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion
Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

After eye contact: Conjunctival redness of the eyes, Irritation,
Following skin contact: Localised redness, oedema, pruritis and/or pain,
Following ingestion: Irritant effects,
Following inhalation: Cough, pain, choking, and breathing difficulties

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4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
co-ordinate firefighting measures to the fire surroundings!
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO_2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products
In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO_2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill
Covering of drains.

Advice on how to clean up a spill
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases
Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Measures to prevent fire as well as aerosol and dust generation
Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool place.

Incompatible substances or mixtures
Observe hints for combined storage. Incompatible materials: see section 10.

Consideration of other advice:

Specific designs for storage rooms or vessels
Recommended storage temperature: 2 – 8 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)
This information is not available.

Environmental values

Relevant PNECs and other threshold levels

End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	68 µg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	6,8 µg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	2,6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	1,85 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,185 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0,329 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection
Use safety goggle with side protection.

Skin protection

• hand protection
Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time.

If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved.

The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material
NBR (Nitrile rubber)

• material thickness

0,11 mm

• breakthrough times of the glove material

480 minutes (permeation: level 6)

• other protection measures
Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection
Respiratory protection necessary at: Aerosol or mist formation.
Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state liquid
Colour colourless
Odour characteristic

Melting point/freezing point 33 °C

Boiling point or initial boiling point and boiling range
218,9 °C at 1.013 hPa

Flammability this material is combustible, but will not ignite readily

Lower and upper explosion limit not determined

Flash point 89 °C at 1.013 hPa (ECHA)

Auto-ignition temperature 275 °C at 994,1 hPa (ECHA)

Decomposition temperature not relevant

pH (value) not determined

Kinematic viscosity not determined

Solubility(ies)

Water solubility 0,71 g/l at 25 °C (TOXNET)

Partition coefficient

Partition coefficient n-octanol/water (log value): 2,98 (TOXNET)

Vapour pressure 0,0648 hPa at 23 °C

Density and/or relative density

Density 0,93 g/cm³

Relative vapour density >1 (air = 1)

9.2 Other information

Information with regard to physical hazard classes:

hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Temperature class (EU, acc. to ATEX) T3

Maximum permissible surface temperature on the equipment: 200°C

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated
Vapours may form explosive mixtures with air.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity
Shall not be classified as acutely toxic.

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	4.300 mg/kg	rat		ECHA
dermal	LD50	>2.000 mg/kg	rat		ECHA

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity
Shall not be classified as germ cell mutagenic.

Carcinogenicity
Shall not be classified as carcinogenic.

Reproductive toxicity
Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure
Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed
irritant effects

• If in eyes
Causes serious eye irritation, conjunctivitis (pink eye)

• If inhaled
cough, pain, choking, and breathing difficulties

• If on skin
causes skin irritation, localised redness, erythema/eschar of the skin, causes skin irritation

• Other information
none

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Endpoint	Value	Species	Source	Exposure time
LC50	70 mg/l	fish	ECHA	96 h
EC50	73 mg/l	aquatic invertebrates	ECHA	48 h
ErC50	68 mg/l	algae	ECHA	72 h

Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
NOEC	25,7 mg/l	microorganisms	ECHA	28 d

12.2 Persistence and degradability

Theoretical Oxygen Demand: 2,904 mg/mg
Theoretical Carbon Dioxide: 2,853 mg/mg

Biodegradation
The substance is readily biodegradable.

Process of degradability

Process	Degradation rate	Time
carbon dioxide generation	80 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) 2,98 (TOXNET)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers/packagings
Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

HP 4 irritant - skin irritation and eye damage

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number not subject to transport regulations

14.2 UN proper shipping name not assigned

14.3 Transport hazard class(es) none

14.4 Packing group not assigned

14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user
There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG) - Additional information
Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information
Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

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Relevant provisions of the European Union (EU)

Restrictions according to, Annex XVII

Name of substance	Name acc. to inventory	CAS No	Restriction No
α-Terpineol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3

Legend

R3

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,

2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
   — can be used as fuel in decorative oil lamps for supply to the general public, and
   — present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:

(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows:
"Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010,
"Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";

(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows:
'Just a sip of grill lighter fluid may lead to life threatening lung damage';

(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';

List of substances subject to authorisation (Annex XIV)/SVHC - candidate list

not listed

Seveso Directive

2012/18/EU (Seveso III)

Deco-Paint Directive

VOC content 100 %

Industrial Emissions Directive (IED)

VOC content 0 %

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed

National inventories (continued)

Country	Inventory	Status
EU	ECSI	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed

Country Inventory	Status
TR CICR	substance is listed
TW TCSI	substance is listed
US TSCA	substance is listed (ACTIVE)
VN NCI	substance is listed

Legend

AIIC Australian Inventory of Industrial Chemicals
CICR Chemical Inventory and Control Regulation
CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)
DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China
INSQ National Inventory of Chemical Substances
KECI Korea Existing Chemicals Inventory
NCI National Chemical Inventory
NZIoC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TCSI Taiwan Chemical Substance Inventory
TSCA Toxic Substance Control Act

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant

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Abbreviations and Acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008
DGR	Dangerous Goods Regulations
EC50	Effective Concentration 50 %
EC No	EC Inventory identifier
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	Reduction in growth rate
GHS	Globally Harmonized System
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50 %
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Rail transport regulation
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008
Regulation (EC) No. 1907/2006 , amended by 2020/878/EU
ADR, RID, IMDG, IATA regulations

List of relevant phrases

Code	Text
H315	Causes skin irritation
H319	Causes serious eye irritation

Disclaimer

This information is based upon the present state of our knowledge. This MSDS has been compiled and is solely intended for this product.

Declaration of Certification for Alpha Terpineol

We hereby declare that our product, Alpha Terpineol, has successfully met the required standards and has been officially certified. This certification affirms that the product complies with the necessary regulatory, safety, and quality requirements, ensuring its suitability for its intended uses.