

Section 1. Product and Company Information

GHS Product Name: 4-Carvomenthenol

Product Code: TER-15-1000

CAS: [562-74-3]

Molecular Formula: C₁₀H₁₈O

4-methyl-1-propan-2-ylcyclohex-3-en-1-ol; 4-Carvomenthenol; 4-Terpineol; 1-Terpinen-4-Ol; P-Menth-1-En-4-Ol; Terpinenol-4; 3-Cyclohexen-1-ol, 4-methyl-1-(1-methylethyl)-; p-Menth-1-en-4-ol; 4-Terpinenol;

Company: MarkHerb

Address: Gedung Riset dan Inovasi (ex. PAU Lt. 8), Institut Teknologi Bandung, Jl Ganesha 10, Bandung 40132

Tel.: +62 877-4556-0063

Fax: -

Website: www.markherb.com

E-mail: info@markherb.com

Section 2. Hazards Identification

2.1 GHS classification

PHYSICAL HAZARDS Not classified

HEALTH HAZARDS

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), H335

ENVIRONMENTAL HAZARDS Not classified

2.2 GHS label elements, including precautionary statements

Pictograms or hazard symbols



Signal word Warning

Hazard statements

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
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.

Section 3. Information on Basic Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	211-213°C at 760 mmHg
Flash Pt:	79.4±0.0°C - Closed cup
Evaporation Rate:	No data
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data
Vapor Pressure (vs. Air or mm Hg):	0.0±0.9 mmHg at 25°C
Vapor Density (vs. Air = 1):	5.3
Specific Gravity (Water = 1):	0.929
Solubility in Water:	Insoluble
Solubility Notes:	Soluble in ethanol; Chloroform; Ethyl Acetate; Oil;
Autoignition Pt:	No data.
Percent Volatile:	No data.
Partition coefficient:	No data.
pH:	No data.

Section 4. First aid measures**Description of first aid measures****If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see **section 2.2**).

Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures**Suitable extinguishing**

Media: Dry chemical, alcohol-resistant foam, water spray, carbon dioxide.

Precautions for firefighters: Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

Special protective:

equipment for firefighters: When extinguishing fire, be sure to wear personal protective equipment.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Do not let product enter drains.

General Information:

Use proper personal protective equipment as indicated in **Section 8**.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete.

Section 7. Handling and Storage

Precautions for safe handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

Storage:

Store in a well closed container. Protected from air and light, refrigerate or freeze (2-8°C)

Specific end uses

Use in a laboratory fume hood where possible. Refer to employer is COSHH risk assessment.

Section 8. Exposure Controls / Personal Protection

Engineering controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Control parameters: Not set up

Personal protective equipment:

Respiratory protection: Dust respirator. Follow local and national regulations.

Hand protection: Protective gloves.

Eye protection: Wear safety glasses and chemical goggles if splashing is possible.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Section 9. Stability and Reactivity

Reactivity

Stable under recommended transport or storage conditions.

Chemical Stability

Stable under normal temperatures and pressures.

Conditions to Avoid

Incompatible materials, strong oxidants, heat, flame, sparks. Extremes of temperature and direct sunlight.

Incompatibilities with Other Materials

Strong oxidising/reducing agents, strong acids/alkalis.

Hazardous Decomposition Products

Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization

Has not been reported.

Section 10. Toxicological Information

Acute Toxicity:	LD50 Oral - Rat - 1300 mg/kg LD50 Intramuscular - Rat - 1500 mg/kg
Skin corrosion/irritation:	Skin - Rabbit
Serious eye damage/irritation:	No data
Germ cell mutagenicity:	No data
Carcinogenicity:	IARC = No data NTP = No data
Reproductive toxicity:	No data

Section 11. Ecological Information

Toxicity:	No data
Persistence and degradability:	No data
Bioaccumulative potential:	No data
Mobility in soil:	No data
Results of PBT & vPvB assessment:	No data
Other adverse effects:	May be harmful to the aquatic environment.

Section 12. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 13. Transport Information

Hazards Class

Does not meet the criteria for classification as hazardous for transport.

UN proper shipping name ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

Section 14. Regulatory Information

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

no data

Chemical Safety Assessment

no data

Section 15. Additional Information

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

-----End of safety data sheet-----