HIMALAYA TERPENES PVT. LTD.
201/5, Jogani Industrial Estate, VN Purav Marg, Chunabhatti Mumbai – 400022.
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MATERIAL SAFETY DATA SHEET
CAMPHENE

1. IDENTIFICATION:

Product Description:	CAMPHENE
CAS #	79-92-5
FEMA Number	2229
Other means of identification	
Recommended use	Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.
Recommended restrictions	For Manufacturing Use Only

Manufacturer/Importer/Supplier/Distributor information:

M/s. Himalaya Terpenens Pvt. Ltd.
201/5, Jogani Industrial Estate,
VN Purav Marg, Sion – Chunabhatti,
Mumbai – 400022.
Tel: +91-22-24056704/05
Fax: +91-22-24056700
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Web Site: www.himalayaterpene.com

2. HAZARD(S) IDENTIFICATION:

Physical hazards	Flammable solids	Category 2
Health hazards	Acute toxicity, dermal	Category 5
	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

Label elements



Signal word	Warning
Hazard statement	Flammable solid. May be harmful in contact with skin. Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Washthoroughly after handling. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Response	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 eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Substances

Chemical name	Common name and synonyms	CAS number	%
CAMPHENE	dextro, laevo- camphene 6, 6- dimethyl- 5- methylidenebicyclo [2. 2. 1] heptane 2, 2- DIMETHYL- 3- METHYLENE NORBORNANE 3, 3- DIMETHYL- 2- METHYLENE NORCAMPHANE	79-92-5	100

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.
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 so that stomach vomit doesn't enter the lungs.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Not available.
General information	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:

Suitable extinguishing media	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
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.

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.

Specific methods Use water spray to cool unopened containers.

General fire hazards Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Eliminate all sources of ignition. 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.

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. Do not allow material to contaminate ground water system. 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 ofspillage to drain/aquatic environment.

7. HANDLING AND STORAGE:

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:

Occupational exposure limits This substance has no PEL, TLV, or other recommended exposure limit.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Use explosion-proof ventilation equipment to stay below exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection **Hand protection**	Chemical resistant gloves.
Other	Not available.
Respiratory protection	Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.
Thermal hazards **General hygiene considerations**	Wear appropriate thermal protective clothing, when necessary. When using do not smoke. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	Refer to Spec Sheet
Physical state	Solid. (Liquided in 46°C)
Form	Solid. (Liquided in 46°C)
Color	Refer to Spec Sheet
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	124.7 °F (51.5 °C)
Initial boiling point and boiling Range	317.3 °F (158.5 °C)
Flash point	73.0 °F (22.8 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Flammable solid.
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	3 mm Hg at 25 °C
Vapor density	4.7
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.85 g/cm3 at 20 °C
Flammability class	Flammable IB estimated
Molecular formula	C10-H16
Molecular weight	136.24 g/mol

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	No dangerous reaction known under conditions of normal use.
reactions	
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition	No hazardous decomposition products if stored and handled as indicated. products.

11. TOXICOLOGICAL INFORMATION:

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May be harmful in contact with skin. Causes mild skin irritation.
Eye contact	Causes serious eye irritation. Causes mild eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred mvision.

Information on toxicological effects

Acute toxicity May be harmful in contact with skin.

Product	Species	Test Results
CAMPHENE (CAS 79-92-5)		
Acute		
Dermal		
LD50	Rabbit	> 2.5 g/kg
Oral		
LD50	Rat	> 5 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Skin - rabbit - No skin irritation - 4 h - OECD Test Guideline 404

Serious eye damage/eye irritation	Causes serious eye irritation.
	Eyes - rabbit - Irritating to eyes. - 24 h - OECD Test Guideline 405
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	Genotoxicity in vitro - Hamster - ovary - with and without metabolic activation – negative
	Genotoxicity in vitro - mouse - lymphocyte - with and without metabolic activation – negative
	Genotoxicity in vivo - mouse - male and female - Oral - negative

Carcinogenicity
IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.
US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not available.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.

12. ECOLOGICAL INFORMATION:

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product		Species	Test Results
CAMPHENE (CAS 79-92-5)			
Aquatic			
Algae	EC50	Green algae (Desmodesmus subspicatus)	> 1000 mg/l, 72 hours Method: OECD Test Guideline 201
Crustacea	EC50	Daphnia magna	0.72 mg/l, 48 hours Method: OECD Test Guideline 202
Fish	LC50	Danio rerio	0.72 mg/l, 96 hours Method: OECD Test Guideline 203
Other	EC50	Activated Sludge	> 1000 mg/l, 3 hours Method: OECD

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	Biodegradability aerobic Result: 14 % - Not readily biodegradable Method: OECD Test Guideline 301C
Bioaccumulative potential	Bioaccumulation Cyprinus carpio (Carp) - 56 d at 25 °C

Bioconcentration factor (BCF): 432 - 922
Method: OECD Test Guideline 305C

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.

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 Product 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 Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

ADN

UN number	1325
UN proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Transport hazard class(es)	4.1
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes

Labels required 4.1

ADR

UN number	1325
UN proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Transport hazard class(es)	4.1
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	4.1

RID

UN number	1325
UN proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Transport hazard class(es)	4.1
Subsidiary class(es)	-
Packing Group	II
Environmental Hazards	Yes
Labels required	4.1
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT
BULK

UN number	1325
Proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)

Hazard class	4.1
Packing group	II
Environmental hazards	
Marine pollutant	Yes
Labels required	4.1

DOT
NON-BULK

UN number	1325
Proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Hazard class	4.1
Packing group	II
Environmental hazards	
Marine pollutant	No
Packaging exceptions	151
Packaging non bulk	212
Labels required	4.1

IATA

UN number	1325
UN proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Transport hazard class(es)	4.1
Subsidiary class(es)	-
Packing group	II
Environmental hazards	No
Labels required	4.1

IMDG

UN number	1325
UN proper shipping name	FLAMMABLE SOLID, ORGANIC, N.O.S. (CAMPHENE)
Transport hazard class(es)	4.1
Subsidiary class(es)	-
Packing group	II
Environmental hazards	
Marine pollutant	Yes
Labels required	4.1
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

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



Marine pollutant



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 Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous Yes
Chemical

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act Not regulated.
(SDWA)

International 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

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

*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	06-13-2014
Revision date	09-08-2016
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
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Revision information This document has undergone significant changes and should be reviewed in its entirety