

SAFETY DATA SHEET

Preparation Date: 04/07/2015

Revision Date: 04/07/2015

Revision Number: G1

Product identifier

Product code: C1164
Product Name: D-(+)-CAMPHOR

Other means of identification

Synonyms:

(+)-2-Bornanone
 (1R)-(+)-Camphor
 (1R)-Camphor
 (1R,4R)-1,7,7-Trimethylbicyclo(2.2.1)heptan-2-one
 (R)-(+)-Camphor
 (R)-Camphor
 Alcanfor
 Bicyclo(2.2.1)heptan-2-one, 1,7,7-trimethyl-, (1R)-
 Camphor USP
 Camphor, (+)-
 Camphor, (1R,4R)-(+)-
 D-(+)-Camphor
 Formosa camphor
 Japanese camphor
 Laurel camphor
 d-2-Bornanone
 d-2-Camphanone
 d-Camphor
 (+)-Bornan-2-one
 Bicyclo(2.2.1)heptan-2-one, 1,7,7-trimethyl-, (1R,4R)-
 Bicyclo(2.2.1)heptan-2-one, 1,7,7-trimethyl-, (1theta)-
 (+)-Camphor
 Camphor, D-
 464-49-3
 EX1260000
 Not available

CAS #:

RTECS #

CI#:

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier:

Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At:

<https://www.spectrumchemical.com>

Emergency telephone number

Contact Person:

Contact Person:

Chemtrec 1-800-424-9300
 Martin LaBenz (West Coast)
 Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Flammable solids	Category 2

Label elements

Warning

Hazard statements

Harmful if swallowed
Causes serious eye irritation
Causes skin irritation
May cause respiratory irritation
Flammable solids



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/./? /equipment
Wear protective gloves
Wear eye/face protection

Precautionary Statements - Response

Specific treatment (see .? on this label)

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
D-(+)-Camphor 464-49-3	464-49-3	100	*

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126).

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes serious eye irritation. Causes skin irritation. Irritating to respiratory system. Central nervous system effects. Excitement. Convulsions. May cause drowsiness or dizziness.. May cause coughing and shortness of breath. Respiratory depression. May cause central nervous system effects. Weak, rapid pulse or rapid heart rate (Tachycardia). Causes digestive (gastrointestinal) tract irritation. Abdominal pain. Vomiting. Nausea. Thirst. Odor of camphor on the breath.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical**Hazardous Combustion Products:**

Carbon oxides

Specific hazards:

Flammable
Containers may explode when heated
When heated to decomposition it emits toxic fumes

Special Protective Actions for Firefighters**Specific Methods:**

For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Remove all sources of ignition.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Use appropriate tools to put the spilled solid in a suitable waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials. Remove all sources of ignition. All equipment used when handling the product must be grounded.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe vapours/dust. Do not ingest. Keep away from heat and sources of ignition. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Technical Measures/Storage Conditions:**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Keep away from heat and sources of ignition. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Strong oxidizing agents. Strong reducing agents. Chlorinated solvents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
D-(+)-Camphor 464-49-3	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
D-(+)-Camphor 464-49-3	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
D-(+)-Camphor 464-49-3	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Effective dust mask. or. Wear respirator with dust filter.. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Solid.	Appearance: Crystals. Crystalline.	Color: White.
Odor: Characteristic.	Taste No information available	Molecular/Formula weight: 152.24 g/mol
Formula: C10-H16-O	Flammability: No information available	Flash point (°C): 64°C
Flashpoint (°C/°F): 64°C/ 148°F	Flash Point Tested according to: Closed cup	Lower Explosion Limit (%): 0.6%
Upper Explosion Limit (%): 3.5%	Autoignition Temperature (°C/°F): 466°C/ 871°F	pH: No information available
Melting point/range(°C/°F): 178-182°C/ 352-360°F	Boiling point/range(°C/°F): 204-207.2°C/ 399-405°F	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Specific gravity: 0.992	Vapor pressure @ 20°C (kPa): 0.027
Density (g/cm3): No information available	Evaporation rate: No information available	Vapor density: 6.1
VOC content (g/L): No information available	Odor threshold (ppm): 1.3	Partition coefficient (n-octanol/water): 3.04
Viscosity: No information available	Miscibility: No information available	Solubility: Easily soluble in methanol Easily soluble in diethyl ether Easily soluble in acetone Very slightly soluble in cold water

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents
Reacts with reducing agents
Reactive with chlorinated solvents

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Strong oxidizing agents. Strong reducing agents. Chlorinated solvents.

Hazardous decomposition products: Carbon oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

D-(+)-Camphor - 464-49-3

LD50/oral/rat = No information available

LD50/oral/mouse = 1310 mg/kg Oral LD50 Mouse

LD50/dermal/rat = No information available

LD50/dermal/rabbit = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

Value - Acute Tox Oral = 1310mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Causes skin irritation. Moderate skin irritation.

Eye Contact:

Causes eye irritation.

Inhalation

Irritating to respiratory system. May affect respiration (respiratory depression, emphysema). Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath. Apnea may occur. May cause nausea, vomiting. May affect behavior/central nervous system (excitement). May affect behavior the brain and central nervous system(muscle contraction and spasticity).

Ingestion

Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Causes abdominal pain (epigastric distress). It causes irritation or a burning sensation of the mouth and throat . Causes vomiting. May cause nausea. May cause thirst. Odor of camphor from the mouth is readily apparent. In cases where excessive dose of camphor was ingested, disturbances of vision such flickering, darkening, or veiling of vision as well as noises in the ears and deafness have occurred.. May cause mydriasis (dilated pupils). May affect behavior/central nervous system (headache, excitement, vertigo, drowsiness, mental confusion, seizures/convulsions, dizziness, twitching of the facial muscles, muscular spasms, feeling of tension, rigidity, and with severe poisoning, unconsciousness or coma). May affect the cardiovascular system (tachycardia). May affect liver . May affect urinary system (kidneys).

Aspiration hazard

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Chronic Toxicity**

Prolonged or repeated inhalation may cause emphysema. Prolonged or repeated skin contact may cause dermatitis.

Sensitization:

No information available

Mutagenic Effects:

No information available

Carcinogenic effects:

Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
D-(+)-Camphor	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity

No data is available

Reproductive Effects:

No information available

Developmental Effects:

No information available

Teratogenic Effects:

No information available

Specific Target Organ Toxicity**STOT - single exposure**

STOT - single exposure. Respiratory system.

STOT - repeated exposure

No information available

Target Organs:

Central nervous system. Kidneys. Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity**Ecotoxicity effects:**

No data available.

Persistence and degradability:

No information available

Bioaccumulative potential:

No information available

Mobility:

No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

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

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
D-(+)-Camphor	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
ERG No: 133
Marine Pollutant: No data available
DOT RQ (lbs): No information available

Symbol(s):

TDG (Canada)

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A

14. TRANSPORT INFORMATION

MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2717
Proper Shipping Name: Camphor
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>D-(+)-Camphor</i>	Present	Not present	Present	Present (4)-308	Present	Present	Present 207-355-2

U.S. Regulations

D-(+)-Camphor

FDA - Direct Food Additives 21 CFR 172.515

FDA - 21 CFR - Total Food Additives 172.515

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>D-(+)-Camphor</i>	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
D-(+)-Camphor	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
D-(+)-Camphor	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

B4 Flammable solid

D-(+)-Camphor

B4

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
D-(+)-Camphor	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
D-(+)-Camphor	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
D-(+)-Camphor	Not listed	Not listed

EU Classification

R-phrase(s)

R11 - Highly flammable.

R22 - Harmful if swallowed.

R36/38 - Irritating to eyes and skin.

S -phrase(s)

S 9 - Keep container in a well-ventilated place.

S16 - Keep away from sources of ignition - No smoking.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 - Wear suitable protective clothing and gloves.

Components	Classification	Concentration Limits:	Safety Phrases
D-(+)-Camphor		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

Xn - Harmful.

F - Highly flammable.

**16. OTHER INFORMATION**

Preparation Date: 04/07/2015
Revision Date: 04/07/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet