



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 22-Mar-2024

Revision Number 2

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

1.1. Product identifier

Product Code(s) MM0103.00
Product Name Camphor, Racemic
Form Not applicable

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

EC No (EU Index No) 200-945-0
CAS No. 76-22-2
Chemical name 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one
Pure substance/mixture Substance
Formula C₁₀H₁₆O
Molecular weight 152.23

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

Recommended use Laboratory use
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM
:+44 (0) 20 8943 7000
Fax :+44 (0) 20 8943 2767
eMail : gb@lgcstandards.com

Web : www.lgcstandards.com

For further information, please contact



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E-mail address sds-request@lgcgroup.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

| Emergency Telephone - §45 - (EC)1272/2008 | |
|---|--------------------------|
| Europe | 112 |
| Austria | No information available |
| Bulgaria | |
| Croatia | |
| Cyprus | |
| Czech Republic | |
| Denmark | |
| France | |
| Hungary | |
| Ireland | |
| Italy | |
| Lithuania | |
| Luxembourg | |
| Netherlands | |
| Norway | |
| Portugal | |
| Romania | |
| Slovakia | |
| Slovenia | |
| Spain | |
| Sweden | |
| Switzerland | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| | |
|---|---------------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 - (H332) |
| Skin corrosion/irritation | Category 2 - (H315) |
| Serious eye damage/eye irritation | Category 1 - (H318) |



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| | |
|--|---------------------|
| Specific target organ toxicity — single exposure | Category 2 - (H371) |
| Flammable solids | Category 2 - (H228) |

2.2. Label elements

Contains 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one



Signal word

Danger

Hazard statements

H315 - Causes skin irritation
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H371 - May cause damage to organs
H228 - Flammable solid

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

This product does not contain any known or suspected endocrine disruptors.

| Chemical name | EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances |
|---|---|--|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one | - | - |



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SECTION 3: Composition/information on ingredients

3.1 Substances

| Chemical name | Weight-% | REACH registration number | EC No (EU Index No) | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|--|----------|---------------------------|---------------------|---|------------------------------------|----------|----------------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | 100 | - | 200-945-0 | Flam. Sol. 2 (H228) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 2 (H371) | | | |

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

No information available

| Chemical name | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|--|-------------------|-------------------|---|--|--------------------------------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | No data available | 2000 | No data available | No data available | No data available |

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If symptoms persist, call a doctor. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open



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| | |
|---|--|
| | while rinsing. Do not rub affected area. Get immediate medical attention. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a doctor. |
| Ingestion | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention. |
| Self-protection of the first aider | Avoid breathing dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required. See section 8 for more information. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Remove all sources of ignition. Avoid contact with skin, eyes or clothing. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-----------------|--|
| Symptoms | Coughing and/ or wheezing. Difficulty in breathing. Burning sensation. |
|-----------------|--|

4.3. Indication of any immediate medical attention and special treatment needed

| | |
|------------------------|------------------------|
| Note to doctors | Treat symptomatically. |
|------------------------|------------------------|

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|---------------------------------------|---|
| Suitable Extinguishing Media | Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam. |
| Large Fire | CAUTION: Use of water spray when fighting fire may be inefficient. |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams. |

5.2. Special hazards arising from the substance or mixture

| | |
|---|---|
| Specific hazards arising from the chemical | Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
|---|---|

5.3. Advice for firefighters

| | |
|---|--|
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|---|--|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures



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Personal precautions

Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. See section 8 for more information. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information

Refer to protective measures listed in Sections 7 and 8. Ventilate the area.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up

Take precautionary measures against static discharges. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections

See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse.



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General hygiene considerations

Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

| Chemical name | European Union | Austria | Belgium | Bulgaria | Croatia |
|--|---|---|--|---|--|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | - | TWA: 2 ppm TWA: 13 mg/m ³ | TWA: 2 ppm TWA: 12 mg/m ³ STEL: 3 ppm STEL: 19 mg/m ³ | STEL: 18.0 mg/m ³ TWA: 12.0 mg/m ³ | TWA: 2 ppm TWA: 13 mg/m ³ STEL: 3 ppm STEL: 19 mg/m ³ |
| Chemical name | Cyprus | Czech Republic | Denmark | Estonia | Finland |
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | - | - | TWA: 2 ppm TWA: 12 mg/m ³ | - | TWA: 0.3 ppm TWA: 1.9 mg/m ³ STEL: 0.9 ppm STEL: 5.7 mg/m ³ |
| Chemical name | France | Germany TRGS | Germany DFG | Greece | Hungary |
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | TWA: 2 ppm TWA: 12 mg/m ³ | - | - | TWA: 12 mg/m ³ STEL: 18 mg/m ³ | - |
| Chemical name | Ireland | Italy MDLPS | Italy AIDII | Latvia | Lithuania |



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| | | | | | |
|--|--|---|--|--|--|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | TWA: 2 ppm TWA: 12 mg/m ³ STEL: 3 ppm STEL: 18 mg/m ³ | - | TWA: 2 ppm TWA: 12.5 mg/m ³ STEL: 3 ppm STEL: 18.7 mg/m ³ | TWA: 3 mg/m ³ | TWA: 3 mg/m ³ |
| Chemical name | Luxembourg | Malta | Netherlands | Norway | Poland |
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | - | - | - | TWA: 2 ppm TWA: 12 mg/m ³ STEL: 4 ppm STEL: 18 mg/m ³ | STEL: 18 mg/m ³ TWA: 12 mg/m ³ |
| Chemical name | Portugal | Romania | Slovakia | Slovenia | Spain |
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | TWA: 2 ppm STEL: 3 ppm | TWA: 6 ppm TWA: 1 mg/m ³ STEL: 18 ppm STEL: 3 mg/m ³ | TWA: 2 ppm TWA: 13 mg/m ³ Ceiling: 26 mg/m ³ | - | TWA: 2 ppm TWA: 13 mg/m ³ STEL: 3 ppm STEL: 19 mg/m ³ |
| Chemical name | Sweden | | Switzerland | | United Kingdom |
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one 76-22-2 | - | | TWA: 2 ppm TWA: 13 mg/m ³ | | TWA: 2 ppm TWA: 13 mg/m ³ STEL: 3 ppm STEL: 19 mg/m ³ |

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. Impervious gloves.

| Gloves | | | |
|---------------------|---------------------------------------|-----------------|--------------------|
| Duration of contact | PPE - Glove material | Glove thickness | Break through time |
| | Wear protective nitrile rubber gloves | | |



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| | |
|--|---|
| Skin and body protection | Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots. |
| Respiratory protection | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| General hygiene considerations | Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. |
| Environmental exposure controls | Do not allow into any sewer, on the ground or into any body of water. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|------------------------|--------------------------|
| Physical state | Solid |
| Appearance | Crystalline powder |
| Colour | white |
| Odour | Characteristic. |
| Odour threshold | No information available |

| Property | Values | Remarks • Method |
|--|--|--------------------------|
| Melting point / freezing point | 180 °C | None known |
| Initial boiling point and boiling range | 204 °C | None known |
| Flammability | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Flash point | 66 °C | None known |
| Autoignition temperature | 466 °C | None known |
| Decomposition temperature | 204 °C | None known |
| pH | No data available | None known |
| pH (as aqueous solution) | No data available | No information available |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |
| Water solubility | Slightly soluble 1.537 g/L | None known |
| Solubility(ies) | Acetone, Chloroform, Ethyl acetate, slightly soluble | |
| Partition coefficient | 2.414 | None known |



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| | | |
|----------------------------|--------------------------|------------|
| Vapour pressure | No data available | None known |
| Relative density | 0.992 | None known |
| Bulk density | No data available | |
| Liquid Density | No data available | |
| Relative vapour density | 5.24 | None known |
| Particle characteristics | | |
| Particle Size | No information available | |
| Particle Size Distribution | No information available | |

9.2. Other information

| | |
|-------------------|-----------------------------------|
| Molecular weight | 152.23 |
| Molecular formula | C ₁₀ H ₁₆ O |

9.2.1. Information with regards to physical hazard classes
Not applicable 204 °C 204 °C

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

Hazardous decomposition products None known based on information supplied.



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SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

| | |
|--------------|--|
| Inhalation | Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components). May cause irritation of respiratory tract. |
| Eye contact | Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes. |
| Skin contact | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). |
| Ingestion | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------|--|
| Symptoms | Coughing and/ or wheezing. Redness. Burning. May cause blindness. May cause redness and tearing of the eyes. |
|----------|--|

Numerical measures of toxicity

Acute toxicity

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|-----------|----------------------|-----------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one | | > 2000 mg/kg (Rat) | |

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

| | |
|---------------------------|--|
| Skin corrosion/irritation | May cause skin irritation. Classification based on data available for ingredients. Causes skin irritation. |
|---------------------------|--|



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| | |
|-----------------------------------|---|
| Serious eye damage/eye irritation | Classification based on data available for ingredients. Causes burns. Causes serious eye damage. |
| Respiratory or skin sensitisation | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |
| Reproductive toxicity | No information available. |
| STOT - single exposure | Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). May cause damage to organs. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard | No information available. |

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

| | |
|---------------------------------|---------------------------|
| Endocrine disrupting properties | No information available. |
|---------------------------------|---------------------------|

11.2.2. Other information

| | |
|-----------------------|---------------------------|
| Other adverse effects | No information available. |
|-----------------------|---------------------------|

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity



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| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|----------------------|------------------------------|----------------------------|--------------------------------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one | - | LC50: 33.25 mg/L (96h, fish) | - | EC50: 4.23 mg/L (72h, Daphnia magna) |

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|---|-----------------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one | 2.414 |

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product contains substance(s) classified as PBT or vPvB.

| Chemical name | PBT and vPvB assessment |
|---|---------------------------------|
| 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one | The substance is not PBT / vPvB |

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.



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Contaminated packaging

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

| | |
|-----------------------------------|---------------------------|
| 14.1 UN number or ID number | UN2717 |
| 14.2 UN proper shipping name | Camphor |
| 14.3 Transport hazard class(es) | 4.1 |
| 14.4 Packing group | III |
| Description | UN2717, Camphor, 4.1, III |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | A803 |
| ERG Code | 3L |

IMDG

| | |
|--|---|
| 14.1 UN number or ID number | UN2717 |
| 14.2 UN proper shipping name | Camphor (1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one) |
| 14.3 Transport hazard class(es) | 4.1 |
| 14.4 Packing group | III |
| Description | UN2717, Camphor (1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one), 4.1, III |
| 14.5 Marine pollutant | NP |
| 14.6 Special precautions for user | |
| Special Provisions | None |
| EmS-No. | F-A, S-I No information available |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

RID

| | |
|-----------------------------------|---------------------------|
| 14.1 UN number or ID number | UN2717 |
| 14.2 UN proper shipping name | Camphor |
| 14.3 Transport hazard class(es) | 4.1 |
| 14.4 Packing group | III |
| Description | UN2717, Camphor, 4.1, III |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |
| Classification code | F1 |

ADR

| | |
|---------------------------------|---------|
| 14.1 UN number or ID number | UN2717 |
| 14.2 UN proper shipping name | Camphor |
| 14.3 Transport hazard class(es) | 4.1 |
| 14.4 Packing group | III |



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| | |
|-----------------------------------|--------------------------------|
| Description | UN2717, Camphor, 4.1, III, (E) |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |
| Classification code | F1 |
| Tunnel restriction code | (E) |

SECTION 15: Regulatory information

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

Water hazard class (WGK) slightly hazardous to water (WGK 1)

Poland

SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union



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Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA

LGC, to the best of its ability, has confirmed that the chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021."

DSL/NDSL

Contact supplier for inventory compliance status

EINECS/ELINCS

Contact supplier for inventory compliance status

ENCS

Contact supplier for inventory compliance status

IECSC

Contact supplier for inventory compliance status

KECL

Contact supplier for inventory compliance status

PICCS

Contact supplier for inventory compliance status

AIIC

Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances



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15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H228 - Flammable solid

H315 - Causes skin irritation

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H371 - May cause damage to organs

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

Ceiling Maximum limit value

STEL

Sk*

STEL (Short Term Exposure Limit)

Skin designation

| Classification procedure | |
|---|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - Vapour | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitisation | Calculation method |
| Skin sensitisation | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard | Calculation method |
| Ozone | Calculation method |



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| | |
|------------------|-----------------------|
| Flammable solids | On basis of test data |
|------------------|-----------------------|

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 22-Mar-2024

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

End of Safety Data Sheet