SECTION 1: Identification

1.1 Product identifier

Product name: D-Limonene (Citrus Terpenes)
Product number: bna-137
Brand: Bulk Apothecary

1.4 Supplier's details

Name: Bulk Apothecary
Address: 115 Lena Dr
        Aurora OH 44202
        United States
Telephone: 1-888-728-7612
email: sales@bulkapothecary.com

1.5 Emergency phone number(s)

Domestic: 1-800-633-8253  International: 801-629-0667

SECTION 2: Hazard identification

General hazard statement
This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1
- Aspiration hazard, Cat. 1
- Flammable liquids, Cat. 3

2.2 GHS label elements, including precautionary statements
Hazard statement(s)

H315  Causes skin irritation
H319  Causes serious eye irritation
H317  May cause an allergic skin reaction
H304  May be fatal if swallowed and enters airways
H226  Flammable liquid and vapor

Precautionary statement(s)

P264  Wash ... thoroughly after handling.
P280  Wear protective gloves/eye protection/face protection.
P302+P352  IF ON SKIN: Wash with plenty of water/...
P321  Specific treatment (see ... on this label).
P332+P313  If skin irritation occurs: Get medical advice/attention.
P362+P364  Take off contaminated clothing and wash it before reuse.
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313  If eye irritation persists: Get medical advice/attention.
P261  Avoid breathing dust/fume/gas/mist/vapors/spray.
P272  Contaminated work clothing must not be allowed out of the workplace.
P333+P313  If skin irritation or rash occurs: Get medical advice/attention.
P363  Wash contaminated clothing before reuse.
P501  Dispose of contents/container to ...
P301+P310  IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P331  Do NOT induce vomiting.
P405  Store locked up.
P210  Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233  Keep container tightly closed.
P240  Ground/bond container and receiving equipment.
P241  Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242  Use only non-sparking tools.
P243  Take precautionary measures against static discharge.
P303+P361+P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378  In case of fire: Use ... to extinguish.
P403+P235  Store in a well-ventilated place. Keep cool.

2.3 Other hazards which do not result in classification
May be harmful if swallowed

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. D-Limonene
D-Limonene (Citrus Terpenes)

Concentration 100 % (weight)
EC no. 227-813-5
CAS no. 5989-27-5

- Aspiration hazard, Cat. 1
- Flammable liquids, Cat. 3
- Hazardous to the aquatic environment - acute hazard, Cat. 1
- Hazardous to the aquatic environment - long-term hazard, Cat. 1
- Sensitization, skin, Cat. 1
- Skin corrosion/irritation, Cat. 2

H226 Flammable liquid and vapor
H304 May be fatal if swallowed and enters airways
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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

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

In case of eye contact Flush eyes with water for 15 minutes. Get medical attention.

If swallowed Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

4.2 Most important symptoms/effects, acute and delayed
Causes serious eye irritation
Moderately irritating to the skin
May cause an allergic skin reaction
Aspiration hazard if swallowed - can enter the lungs and cause damage
Aspiration into the lungs may cause pulmonary edema
Aspiration into the lungs may cause chemical pneumonitis
Causes digestive (gastrointestinal) tract irritation
May cause abdominal pain, nausea, vomiting, diarrhea
Central nervous system effects
Weak, rapid pulse or rapid heart rate (Tachycardia)
May affect the liver
It may affect the kidneys
May affect respiration
Respiratory depression
D-Limonene (Citrus Terpenes)

Dyspnea (Difficulty breathing and shortness of breath)

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Carbon dioxide (CO2). Dry chemical. Water spray mist or foam. Alcohol-resistant foam.

5.2 Specific hazards arising from the chemical
Carbon monoxide; Carbon dioxide

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and materials for containment and cleaning up
Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials. Air sensitive.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

TLV® (Inhalation): 20 ppm (ACGIH)

8.2 Appropriate engineering controls

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Goggles

Body protection
Chemical resistant apron
Long sleeved clothing
Gloves

Respiratory protection
Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/form (physical state, color, etc.)</td>
<td>Clear Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>strong citrus</td>
</tr>
<tr>
<td>Odor threshold</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-95.5 to -74 °C/-139.9 to -102.1 °F</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>45-48°C/113.4-118.4 °F</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability limits</td>
<td>6.1%/0.7%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>0.16-0.2</td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>237°C/458.6°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1 Reactivity
Reactive with oxidizing agents
Reacts violently with a mixture of iodine pentafluoride and tetrafluoroethylene, causing fire and explosion hazard

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerization does not occur

10.4 Conditions to avoid

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
Carbon monoxide. Carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
No information available

Skin corrosion/irritation
Contact causes skin irritation. Moderately irritating to the skin. It may be absorbed through the skin. May cause burning sensation, itching, redness. May cause allergic skin reaction/rashes/urticaria (hives).

Serious eye damage/irritation
Causes serious eye irritation. Moderately irritating to the eyes.

Respiratory or skin sensitization
Aspiration hazard. May be fatal if swallowed and enters airways.

Carcinogenicity
Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity
No information available

Aspiration hazard
Aspiration hazard. May be fatal if swallowed and enters airways.

Additional information
May be harmful if swallowed. Aspiration hazard if swallowed. Aspiration into the
lungs can cause chemical pneumonitis. Aspiration may lead to pulmonary edema. May cause digestive (gastrointestinal) tract irritation with nausea, vomiting, diarrhea. May cause abdominal pain. Ingestion may cause coughing and choking due to irritant effects. May affect respiration (dyspnea, respiratory depression). It may cause central nervous system depression. May affect behavior/central nervous system (somnolence, ataxia). It may affect behavior/central nervous system (convulsions, excitement). May affect the cardiovascular system (tachycardia). May affect the kidneys (albuminuria, hematuria).

SECTION 12: Ecological information

Toxicity
Maybe harmful to the aquatic environment.

Persistence and degradability
No information available

Bioaccumulative potential
Potential for bioconcentration in aquatic organisms is high

Mobility in soil
Low mobility

SECTION 13: Disposal considerations

Disposal of the product
Low mobility

Disposal of contaminated packaging
Empty containers should be taken for local recycling, recovery or waste disposal

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

SECTION 14: Transport information

DOT (US)
UN Number: UN2052
Class: 3
Packing Group: III
Proper Shipping Name: Dipentene
Marine pollutant: Yes
Poison inhalation hazard: Yes

IMDG
UN Number: UN2052
Class: 3
Packing Group: III
EMS Number: F-E
Proper Shipping Name: Dipentene
Safety Data Sheet  
D-Limonene (Citrus Terpenes) 

IATA  
UN Number: UN2052  
Class: 3  
Packing Group: III  
Proper Shipping Name: Dipentene 

SECTION 15: Regulatory information 

15.1 Safety, health and environmental regulations specific for the product in question 

SARA 302 Components  
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. 

SARA 313 Components  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. 

SARA 311/312 Hazards  
Fire Hazard, Acute Health Hazard, Chronic Health Hazard 

Massachusetts Right To Know Components  
D-Limonene 

Pennsylvania Right To Know Components  
D-Limonene 

New Jersey Right To Know Components  
D-Limonene 

California Prop. 65 Components  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. 

HMIS Rating 

<table>
<thead>
<tr>
<th>D-Limonene (Citrus Terpenes)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>1</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>1</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
</tr>
<tr>
<td>PERSONAL PROTECTION</td>
<td></td>
</tr>
</tbody>
</table>

NFPA Rating
SECTION 16: Other information

16.1 Further information/disclaimer

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