



MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: D-LIMONENE

Company: Recochem Inc. ABN: 69 010 485 999
Address : 1809 Lytton Road, Lytton, Queensland 4178
Phone: (07) 3308 5200 Fax: (07) 3308 5201
Emergency Telephone Number: (07) 3308 5200 Day, After Hours 1300 131 001

Other Names: Dipentene
Manufacturer's Product Code: 16888
Recommended Use: Lubricant, rust preventative, penetrant, polish, preservative

SECTION 2 HAZARDS IDENTIFICATION

**CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE AUSTRALIA
A DANGEROUS GOODS ACCORDING TO THE CRITERIA OF THE ADG CODE**

Symbols: Xi - Irritant
N - Dangerous for the environment

Risk Phrases: R10 - Flammable
R38 - Irritating to skin
R43 - May cause sensitisation by skin contact
R50/53 - Very toxic to aquatic organisms, may cause long term adverse effects on the aquatic environment

Safety Phrases: S2 - Keep out of the reach of children
S24 - Avoid contact with skin
S37 - Wear suitable gloves
S43 - In case of fire use sand, earth, chemical powder or foam
S60 - This material and its container must be disposed of as hazardous waste
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS

<i>Chemical Entity</i>	<i>CAS Number</i>	<i>Proportion (%)</i>
D-Limonene	5989-27-5	95 - 100

SECTION 4 FIRST AID MEASURES

FIRST AID TREATMENT

Swallowed: If swallowed, do NOT induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Eye: If in eyes, hold eyes open, flood with water for at least 15 minutes. If redness, burning, blurred vision, or swelling persist transport to nearest medical facility for additional treatment.

Skin: If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available.

Inhaled: Remove victim from exposure if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment. Remove contaminated clothing.

First Aid facilities: Potable water should be available to rinse eyes or skin. Provide eye baths and safety showers.

Advice to Doctor: Treat symptomatically.

Additional Information: None available.

Product: D-LIMONENE

SECTION 5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Foam, dry chemical powder, carbon dioxide for small fires only. Do not use water in a jet.
Hazards from combustion products: Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Vapour is heavier than air, can spread along ground and distant ignition is possible.
Precautions for Fire Fighters and Special Protective Equipment: Wear full protective clothing and self-contained breathing apparatus.
Additional Information: Hazchem code 3Y.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Observe all local and national regulations.

Spills and Disposal: Avoid contact with spilled or released material. Shut off leaks, if possible without personal risks. Remove all sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterway using sand, earth or other appropriate barriers. Take precautionary measure against static discharge. Ensure electrical continuity by bonding and earthing all equipment.

Methods and Materials for Containment and Clean Up Procedures: For small spills (<1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely. For larger spills (> 1 drum), transfer by means such as a vacuum truck to a salvage tank for recovery or disposal. Do not flush residues with water. Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling and Storage: Avoid breathing of or contact with material. Use in well ventilated areas. Wash thoroughly after handling. Avoid contact with skin and eyes and clothing. Handle open containers in well ventilated area. Ensure that the workplace is ventilated such that the Occupational Exposure limit is not exceeded. Do not empty into drains. Do not eat, drink or smoke in contaminated areas. Before eating, drinking or smoking, remove contaminated clothing and wash hands. Do not store near strong oxidants.
Dispensing: Electrostatic charges may be generated during transfer. Electrostatic discharge may cause fire. Ensure electrical continuity by earthing all equipment.
Flammability: Flammable.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: No exposure standards have been established by the Australian National Occupational Health and Safety Commission.
Biological Limit Values: No biological limit allocated.

Personal Protective Equipment:

Respiratory Protection: If engineering controls are not effective in controlling airborne exposure, use appropriate respiratory protection equipment. When using respirators, select an appropriate combination of mask and filter and select a filter for organic gases and vapours (boiling point > 65 Deg C). Respirators should comply with AS1716 or an equivalent approved by a state/territory authority.
Hand Protection: Use solvent resistant gloves (nitrile for longer term protection or PVC and neoprene for incidental splashes).
Eye Protection: Wear safety goggles.
Protective Clothing: Use chemical resistant glove/gauntlets, boots and apron. Skin protection not ordinarily required beyond standard issue work clothes.
Engineering Controls: Ensure that adequate ventilation is provided. Maintain air concentrations below recommended exposure standards. Avoid generating and inhaling mists. Keep containers closed when not in use.

SECTION 9 IDENTIFICATION

PHYSICAL DESCRIPTION / CHEMICAL PROPERTIES

Appearance	Colourless to yellow liquid
Odour	Characteristic
pH:	N/A
Vapour Pressure (mmHg @ 20°C):	2
Vapour Density (air = 1)	Not Available

Product: D-LIMONENE

Boiling Point (°C):	175
Freezing/Melting Point (°C):	Data not available
Solubility in Water	Not miscible with water
Specific Gravity (g/ml @ 15°C):	0.84
Flashpoint (°C):	46
Explosion/Flammability Limits (%):	0.7 - 6.1

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of use.

Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials: Strong oxidising agents.

Hazardous Decomposition Products: Thermal decomposition is highly dependant on conditions. A complex mixture of airborne solids, liquids, gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 TOXICOLOGICAL INFORMATION

HEALTH EFFECTS

Acute:

Swallowed: Ingestion may irritation to the gastrointestinal tract, nausea and vomiting. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Eye: May be irritating to eyes.

Skin: Irritating to skin. Symptoms can include redness, itching, possible dermatitis. May cause sensitisation by skin contact.

Inhaled: Inhalation of vapours or mists may cause irritation to the respiratory system, headaches and coughing.

Chronic: Repeated or prolonged exposure can cause defatting of skin and can lead to dermatitis.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid contaminating drains or waterways.

Mobility: Floats on water.

Persistence/degradability: Not available.

Bioaccumulation: Not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods: Ensure waste disposal conforms to local waste disposal regulations.

SECTION 14 TRANSPORT INFORMATION

UN Number:	2319	Proper Shipping Name:	TERPENE HYDROCARBONS, N.O.S.-(D-LIMONENE)
Class:	3	Subsidiary Risk:	None allocated
Packing Group:	III	Hazchem Code:	3Y
Special Precautions for User:	None		

SECTION 15 REGULATORY INFORMATION

Poisons Schedule : Not scheduled

AICS : Listed

Dangerous Goods Initial Emergency Response Guide (SAA/SNZ HB76:2010) : 15

SECTION 16 OTHER INFORMATION

Further Information may be obtained by contacting Recochem on (07) 3308 5200

Product: D-LIMONENE

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product.
