SAFETY DATA SHEET

100% TECHNICAL GRADE d-LIMONENE

Product Code: B-TGDXXX
Effective Date: Oct 29, 2026
Version: 2.0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	**100% Technical Grade d-Limonene**	**CAS Number**	5989-27-5
Synonyms	4-Isopropenyl-1-methylcyclohexene, Citrus Terpene, Technical Limonene	**Formula**	$C_{10}H_{16}$
Supplier Details	**Blendmagic Products, LLC** | PO Box 220, East Islip, NY 11730 | Tel: (631) 572-3381 / (888) 605-4332		
Recommended Use	For use in adhesive resins, flavors, fragrances, industrial solvents, and heavy-duty degreasing agents.		
Emergency Numbers	**24/7 CHEMTREC (USA):** (800) 424-9300 | **International:** +1 (703) 527-3887		

2. HAZARDS IDENTIFICATION

Signal Word	**DANGER**
GHS Classification	• Flammable Liquids – Category 3 (H226) • Aspiration Hazard – Category 1 (H304) • Skin Corrosion/Irritation – Category 2 (H315) • Skin Sensitization – Category 1 (H317) • Aquatic Hazard (Acute/Chronic) – Category 1 / 2 (H410)
Hazard Statements	Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

GHS PICTOGRAMS



Precautionary Statements:

Prevention:

- Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
- Keep container tightly closed. Ground and bond container and receiving equipment.
- Use explosion-proof electrical, ventilating, and lighting equipment. Use non-sparking tools.
- Avoid release to the environment. Wear protective gloves and eye/face protection.
- Contaminated work clothing should not be allowed out of the workplace.

Response & Storage:

- **IF SWALLOWED:** Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
- **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.
- In case of fire: Use ABC powder, CO_2, or alcohol-resistant foam to extinguish.
- Store locked up in a well-ventilated place. Keep cool.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component Name	CAS Number	Amount %	GHS-US Classification
d-Limonene (Technical Grade)	5989-27-5	100%	Flam. Liq. 3 (H226); Asp. Tox. 1 (H304); Skin Irrit. 2 (H315); Skin Sens. 1 (H317); Aqu. Chron. 1 (H410)

4. FIRST AID MEASURES

- **Inhalation:** Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if feeling unwell.
- **Skin Contact:** Immediately take off all contaminated clothing. Flush skin with plenty of water and soap. If skin irritation or rash occurs, get medical attention. Wash clothing before reuse.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if eye irritation persists.
- **Ingestion: ASPIRATION HAZARD.** Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Risk of severe chemical pneumonitis if inhaled into lungs.
- **Most Important Symptoms:** Fatal if swallowed and enters airways. Causes skin irritation, redness, drying, itching, allergic sensitization rash, and upper respiratory tract irritation.

5. FIRE-FIGHTING MEASURES

- **Extinguishing Media:** ABC dry chemical powder, carbon dioxide (CO_2), or alcohol-resistant foam. Do NOT use solid water jet as it may spread fire.
- **Specific Fire Hazards:** Flammable liquid and vapor. Vapors may travel to ignition source and flash back. Static charge accumulation hazard. Combustion produces Carbon Monoxide (CO), Carbon Dioxide (CO_2), and acrid hydrocarbon smoke.
- **Protective Actions:** Wear positive-pressure SCBA and full chemical-resistant turnout gear. Cool fire-exposed drums with water spray. Contain runoff water.

6. ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Eliminate all ignition sources (no flames, sparks, or smoking). Wear protective gloves, protective suit, and safety goggles. Avoid breathing vapors or mists. Ensure local exhaust ventilation.
- **Environmental Precautions:** Prevent entry into sewers, watercourses, basements, or ground soil. Toxic to aquatic life with long-lasting effects. Collect spillage.
- **Clean-Up Methods:** Contain liquid spill with inert sand, earth, or vermiculite. Collect using non-sparking tools and place into closed containers for disposal. Do not use compressed air for pumping. Clean residue with water and detergent.

7. HANDLING AND STORAGE

Safe Handling Precautions:
Avoid contact with eyes, skin, and clothing. Do not breathe vapors. Use only non-sparking tools and explosion-proof equipment. Ground and bond containers during liquid transfer. Wash thoroughly after handling.

Storage Conditions:
Store locked up in a cool, dry, well-ventilated area away from direct sunlight, heat, open flames, and strong oxidizing agents. Keep containers tightly closed in original packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	OSHA PEL	ACGIH TLV	AIHA WEEL (d-Limonene)
d-Limonene (5989-27-5)	Not established	Not established	30 ppm TWA (8-hr)

Engineering Controls: Local exhaust or explosion-proof general dilution ventilation to keep vapor concentrations below threshold limits. Eyewash stations and safety showers must be nearby.

Personal Protective Equipment (PPE):
• **Eye/Face:** Safety glasses with side shields or chemical goggles.
• **Skin:** Nitrile or Viton impervious gloves and protective coveralls.
• **Respiratory:** NIOSH-approved organic vapor respirator if ventilation is inadequate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to pale yellow liquid
Odor	Strong citrus scent
pH Value	Not applicable (Nonaqueous)
Melting Point	-96°C (-141°F)
Boiling Point	175.5°C – 176.0°C (348°F)
Flash Point	54.4°C (130°F) Closed Cup

Vapor Pressure	< 2 mmHg @ 20°C (68°F)
Vapor Density	4.7 (Air = 1.0)
Specific Gravity	0.84 g/mL @ 20°C
Solubility in Water	Insoluble (0%)
Dynamic Viscosity	0.923 cP @ 25°C (77°F)
Kinematic Viscosity	≤ 20 cSt @ 20°C

10. STABILITY AND REACTIVITY

- **Reactivity:** Reacts exothermically with strong oxidizing agents, mineral acids, and halogenated compounds.
- **Chemical Stability:** Stable under recommended storage conditions. May oxidize on exposure to air and light.
- **Possibility of Hazardous Reactions:** Flammable liquid and vapor. Polymerization will not occur under normal storage.
- **Conditions to Avoid:** Heat, sparks, open flames, static discharge, elevated temperatures, and direct exposure to light or air.
- **Incompatible Materials:** Strong oxidizing agents, strong acids, halogens, peroxides.
- **Hazardous Decomposition Products:** Carbon Monoxide (CO), Carbon Dioxide (CO_2), and acrid hydrocarbon smoke.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity Endpoint Values:
• **Oral LD50 (Rat):** > 2,000 mg/kg (Low oral toxicity).
• **Dermal LD50 (Rabbit):** > 5,000 mg/kg.
• **Inhalation LC50:** Not established.

Health Hazards & Specific Effects:
• **Aspiration Hazard:** Category 1 — May be fatal if swallowed and enters airways.
• **Skin Contact:** Category 2 Skin Irritant; Category 1 Skin Sensitizer.
• **Carcinogenicity:** Not listed by IARC, NTP, ACGIH, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life with long-lasting effects (d-Limonene LC50/EC50 fish/daphnia: 0.1 to 1.0 mg/L). Volatilizes rapidly from surface water.
Persistence & Degradability: Readily biodegradable (OECD 301C). BCF = 683 L/kg (< 2,000 L/kg); low bioaccumulation potential. Log Kow < 4.5.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, regional, national, and international regulations. Incinerate under surveillance with energy recovery or recycle by distillation. Avoid discharge into surface waters or public sewers.

14. TRANSPORT INFORMATION

UN Number	UN2319
Proper Shipping	TERPENE HYDROCARBONS, N.O.S. (d-Limonene)
Hazard Class / PG	Class 3 (Flammable) / PG III
DOT Ground Exemption	Combustible Liquid Exception (49 CFR 173.150) in non-bulk
ERG Guide / Marine	Guide 128 / Marine Pollutant (Yes)

15. REGULATORY INFORMATION

US Federal Regulations: All components listed on TSCA Inventory. SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard (Aspiration / Skin Sensitizer). SARA 313: Not subject to reporting under Section 313. CERCLA RQ: Not listed.
State Right-to-Know: Listed on NJ, PA, MA, and FL Right-to-Know substance lists. California Prop 65: Not listed.
Canadian WHMIS 2015: Classified as Flammable Liquid Cat 3, Aspiration Hazard Cat 1, Skin Irritant Cat 2, Skin Sensitizer Cat 1 under HPR.

16. OTHER INFORMATION

NFPA 704 Rating: Health: 2 | Flammability: 2 | Instability: 0
HMIS Rating: Health: 2 | Flammability: 2 | Physical Hazard: 0

Effective Date: October 29, 2026 (Version 2.0)
Prepared By: Blendmagic Products, LLC Technical Dept.