

Section I – Product Identification**Manufacturer's Name:**

ACME Soap, Inc. for Practical Environmental Solutions
1206 Fulton Ave.
San Antonio, Texas 78201
(210) 493-7172

After Hours Emergency Assistance: CHEMTREC (800) 424-9300 (U.S.)

Product Name: PES-51™
Chemical Name: Organic Biocleanser
Chemical Family: Organic
Formula: Organic Chemical Mixture
Revision Date: 05/01/2008

<u>Hazard Rating</u>	<u>(HMIS)</u>	<u>Hazard Rating Scale</u>
Health:	1	0 = Minimal
Flammability:	2	1 = Slight
Reactivity:	0	2 = Moderate
Protective:	G	3,4 = Serious G = Gloves

d-Limonene CAS No.: 5989-27-5

PES Code: 410

Date Issued: 03/93

Section II – Physical Data

Appearance and Odor: Clear liquid, variable colorless to light yellowish cast with strong citrus odor

Specific Gravity @25° C: 0.8400

Boiling Point: 325°F (163°C)

Vapor Pressure @ 20° C: 1.9 mm Hg

Vapor Density (Air=1) @20°C: N/1

Solubility in Water: Insoluble

Percent Volatile: 92 + %

Evaporation Rate (ether = 1): Less than 1

Section III – Fire and Explosion Hazard Data

Flash Point (TOC): 124°F (51°C)

Flammable Limits: (@302°F) LEL 0.7%, UEL 6.1%

Extinguishing Media: CO₂ foam and dry chemical

Special Fire Fighting Procedures: SCBA recommended: Smother to exclude air. Do not use water; handle as an oil Fire Class B fire procedures.

Unusual Fire and Explosion Hazards: Combustible liquid; keep away from heat, sparks, and open flames.



Section IV – Health Hazard Data (for d-Limonene component of PES-51™)

Threshold Limit Value (TLV):	Undetermined by ACGIH
Permissible Exposure Limit (PEL):	Undetermined by OSHA
Following Health Hazard has been Determined:	Harmful if swallowed. May be irritating to skin and eyes. Not listed as carcinogen by NTP, OSHA, or LARC. FEMA and FDA list d-Limonene as GRAS, “generally recognized as safe.”
Toxicity Testing:	RIFM Lists
Acute Oral:	LD ₅₀ (rat) > 5g/kg
Acute Dermal:	LD ₅₀ (rabbit) > 5g/kg
Signs and Symptoms of Overexposure:	None under conditions of expected use
Medical Conditions Generally Recognized as Being Aggravated by Exposure:	None Known
Emergency & First Aid Procedures:	
Eyes:	Remove contact lenses at once. Flush with water for at least 15 minutes. If irritation persists, see a physician.
Skin:	Wash with soap and water.
Indigestion:	Do not induce vomiting. Get immediate medical attention.
Inhalation:	If symptoms of overexposure are experienced, evacuate to fresh air. If symptoms persist, seek medical attention.
Reported Human Effects:	Irritation – mildly irritating (none in 10% petrolatum).

Section V – Reactivity Data

Stability:	Stable
Conditions to Avoid:	Excessive or extreme heat
Incompatible with:	Strong oxidizing agents and acidic agents, including clays. Reacts explosively with iodine pentafluoroethylene.
Hazardous Decomposition Products:	Smoke may be acrid and fumes irritating. Burning generates CO, CO ₂ and smoke. Product is not an oxygen donor.
Conditions to Avoid for Polymerization:	Polymerization catalysts such as aluminum chloride

Section VI– Spill, Leak, and Disposal Procedures

Steps to be taken in case material is released or spilled:	Soak up on absorbent material. CAUTION: Slippery on floor.
Waste Disposal Method:	Incinerate or dispose of in accordance with all local, State, and Federal regulations.



Section VII – Special Protection Information

Respiratory Protection: Not normally required, but if vapor concentration becomes high, use either half or full face respirator mask with organic respirator vapor cartridges. (NIOSH approved)

Ventilation: Local exhaust should be adequate. Mechanical ventilation otherwise recommended, if necessary.

Personal Protective Equipment: Chemical resistant gloves, chemical splash goggles or face shield for eye protection.

Other Protective Equipment: For industrial use, chemically resistant splash proof clothing is recommended.

Appropriate Hygienic Practice: Wash thoroughly with soap and water after handling.

Section VIII – Fire and Explosion Information**Precautions to be Taken**

in Handling: Usual precautions for combustible liquids.

Handling and Storage Precautions: Keep temperature below 140°F (60°C) for quality control. Avoid acids and oxidizing agents. Store in tightly sealed full containers. Clean up all spills. All handling equipment should be electrically grounded.

Other Precautions: Product may expand slightly in storage causing pressure to build on container. Open container carefully if product appears to be under pressure.

IX – Regulatory Status (for d-Limonene component of PES-51™)

1. FDA lists d-limonene as GRAS – “generally recognized as safe.”
2. NTP, OSHA, and IARC do **NOT** list product as carcinogenic to humans.
3. Unused product is **NOT** listed by EPA as hazardous waste (40CFR Part 261).
4. D-limonene is **NOT** listed on California’s Prop. 65n toxic substance list.
5. D-limonene is listed on EPA’s Chemical Inventory (PL 94-469); however, it is NOT on EPA’s CORR (Chemicals of Regulatory Rules) list, which contains those materials which pose a health or environment risk.
6. D-limonene does **NOT** contain lead, cadmium, mercury, or hexavalent chromium or come in contact with these chemicals since it is a citrus derived essential oil produced by steam distillation. Further, d-limonene is packaged in food grade containers with inert liners that do **NOT** contain lead, cadmium, mercury, or hexavalent chromium.
7. D-limonene does **NOT** contain and is **NOT** manufactured with any of the Class I or II ozone-depleting substances listed under the United States Clean Air Act of 1990.
8. Since d-limonene is a combustible liquid, it is hazardous under OSHA 29CFR 1910.120. D-limonene does require MSDS sheets.



Section X – Shipping Classification

Shipping Name: TERPENE HYDROCARBONS, N.O.S.
Hazard Class: 3 (3.3 for Canada)
ID Number: UN#2319, NMFC #149980, SUB-1, Class 55
Packaging Group: III
Highway/Rail: Per requirements for COMBUSTIBLE LIQUIDS
Air/Ship: Per requirements for FLAMMABLE LIQUIDS

Emergency Phone Numbers: CHEMTREC (800) 424-9300 (U.S.)

Section XI - Notice

All statements, information and data provided in this material safety data sheet are believed to be accurate and reliable, but are presented without guarantee, or responsibility of any kind, expressed or implied, on our part. Users should make their own investigations to determine the suitability of the information or products for their particular purpose. Nothing contained herein is intended as permission, inducement or recommendation to violate any laws or to practice any invention covered by existing patents.

