

SAFETY DATA SHEET



Envirobead™ - Lemon

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance or preparation

Product name : Envirobead™ - Lemon **Code**

Trade name : Envirobead™ - Lemon PL.605/100

Product type : Liquid.

Use of the substance/preparation : Autoclave deodorant to be used when autoclaving laboratory waste (one capsule per autoclave load).

Supplier/Manufacturer : Pro-Lab Diagnostics
20 Mural Street, Unit 4
Richmond Hill, ON
Canada L4B 1K3
Tel: +1-905-731-0300
Fax: +1-905-731-0206
www.pro-lab.com

e-mail address of person responsible for this SDS : support@pro-lab.com

Emergency telephone number (with hours of operation) : +44 (0)151 353 1613 -Monday to Friday 9:00 am to 5:00 pm.
+44 (0)7714 429 646 -Outside the above hours.

2. HAZARDS IDENTIFICATION

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Muta. Cat. 2; R46
Xi; R38
R43
N; R51/53

Physical/chemical hazards : Flammable.

Human health hazards : May cause heritable genetic damage. Irritating to skin. May cause sensitisation by skin contact.

Environmental hazards : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Preparation

Ingredient name	CAS number	%	EC number	Classification
Terpenes and terpenoids, lemon-oil	68917-33-9	10 - 30		R10 [1] Xi; R38 N; R50/53
Benzyl benzoate	120-51-4	10 - 30	204-402-9	Xn; R22 [1]
Geranyl nitrile	5146-66-7	5 - 10	225-918-0	Muta. Cat. 2; [1] R46 N; R51/53
D-Limonene	5989-27-5	5 - 10	227-813-5	R10 [1] Xi; R38 R43 N; R50/53
Decanal	112-31-2	1 - 5	203-957-4	Xi; R38 [1] R52/53
Dipentene	138-86-3	0.1 - 1	205-341-0	R10 [1] Xi; R38 R43 N; R50/53
dl-Citronellol	106-22-9	0.1 - 1	203-375-0	Xi; R38 [1]

3. COMPOSITION/INFORMATION ON INGREDIENTS

Methyl b-naphthyl ketone See section 16 for the full text of the R-phrases declared above	93-08-3	0.1 - 1	202-216-2	R43 N; R51/53 N; R51/53 [1]
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in section 8.

4. FIRST AID MEASURES

First-aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Obtain medical attention if symptoms occur.
- Skin contact** : Wash with soap and water. Obtain medical attention if symptoms occur.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.

Special exposure hazards

- : Combustible liquid.
Use water spray to keep fire-exposed containers cool. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

- : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up

Small spill

- : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill

- : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling

- : Put on appropriate personal protective equipment (see section 8). Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous.

Storage

- : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Packaging materials

Recommended

- : Use original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Ingredient name

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

- : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

Occupational exposure controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): Natural rubber (latex).
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Splash goggles.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Lab coat.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance

- Physical state** : Liquid contained in a gelatin capsule.
- Colour** : Clear.
- Odour** : Citrus fragrance.
- Odour threshold** : Not available.

Important health, safety and environmental information

- Flash point** : Closed cup: 48°C (118.4°F) [Pensky-Martens.]

10. STABILITY AND REACTIVITY

- Stability** : The product is stable.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid exposure - obtain special instructions before use. Avoid release to the environment. Refer to special instructions/safety data sheet.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials, reducing materials, acids and alkalis.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : Irritating to mouth, throat and stomach.
- Skin contact** : Irritating to skin. May cause sensitisation by skin contact.
- Eye contact** : May cause eye irritation.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product/ingredient name	Species	Dose	Result	Exposure
Benzyl benzoate	Rabbit	4 g/kg	LD50 Dermal	-
	Rat	4 mL/kg	LD50 Dermal	-
	Rat	1700 uL/kg	LD50 Oral	-
D-Limonene	Rabbit	>5 g/kg	LD50 Dermal	-
	Rat	4400 mg/kg	LD50 Oral	-
Decanal	Rabbit	5040 uL/kg	LD50 Dermal	-
	Rat	3730 uL/kg	LD50 Oral	-
Dipentene	Rat	5300 mg/kg	LD50 Oral	-
	Rabbit	2650 mg/kg	LD50 Dermal	-

Potential chronic health effects

Reproductive toxicity

Chronic effects : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : May cause heritable genetic effects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : No specific data.

Target organs : Contains material which may cause damage to the following organs: skin, eye, lens or cornea.

12. ECOLOGICAL INFORMATION

Environmental effects : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic ecotoxicity

Product/ingredient name	Test / Type	Species	Dose	Exposure
D-Limonene	Acute EC50 69600 ug/L	Daphnia	-	48 hours
	Acute LC50 35000 ug/L	Fish	-	4 days
	Acute LC50 702 to 796 ug/L	Fish	-	96 hours
Dipentene	Acute EC50 17 to 33 ppm	Daphnia	-	48 hours
	Acute LC50 80 to 88.7 ppm	Fish	-	96 hours

Other adverse effects : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

14. TRANSPORT INFORMATION

International transport regulations

ADR/RID / IMDG / IATA Classes : Not regulated.
Limited Quantity Exemption

15. REGULATORY INFORMATION

EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Hazard symbol or symbols :



Toxic, Dangerous for the environment

Risk phrases

: R10- Flammable.
R46- May cause heritable genetic damage.
R38- Irritating to skin.
R43- May cause sensitisation by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

: S16- Keep away from sources of ignition - No smoking.
S53- Avoid exposure - obtain special instructions before use.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Contains

: Geranyl nitrile
D-Limonene

Product use

: Industrial applications.

Europe inventory

: All components are listed or exempted.

Other EU regulations

Restrictions on the Marketing and Use Directive

: Restricted to professional users.

16. OTHER INFORMATION

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)

: R10- Flammable.
R46- May cause heritable genetic damage.
R22- Also harmful if swallowed.
R38- Irritating to skin.
R43- May cause sensitisation by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK)

: Muta. Cat. 2 - Mutagen Category 2
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

History

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.