PRO-LAB DIAGNOSTICS

Date : 12/01/2011
Version : 3

Material Safety Data Sheet

Envirobead™ - Apple

1. Product and company identification

Product name : Envirobead™ - Apple

			Code
Trade name	:	Envirobead™ - Apple	PL.604/100

Material uses : Autoclave deodorant to be used when autoclaving laboratory waste (one capsule per autoclave load).

Code : PL.604/100

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

MSDS authored by : KMK Regulatory Services Inc.

In case of emergency : 905-731-0300 –Monday to Friday 8:30 am to 5:00 pm Eastern Standard Time.
416-230-0692 –Outside the above hours.

2. Hazards identification

Emergency overview

Physical state : Liquid contained in a gelatin capsule.

Color : Clear.

Odor : Apple-like.

Signal word : WARNING !

Hazard statements : HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CAUSES EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Precautionary measures : Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : May be harmful if swallowed.

Skin : May be harmful if absorbed through skin. Irritating to skin.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

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.

2. Hazards identification

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Benzyl benzoate	120-51-4	10 - 30
2-tert-Butylcyclohexyl acetate	88-41-5	10 - 30
Diethyl malonate	105-53-3	10 - 30
Nopyl acetate	128-51-8	10 - 30
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	1222-05-5	5 - 10
3-p-Cumenyl-2-methylpropionaldehyde	103-95-7	5 - 10
Undecan-4-olide	104-67-6	1 - 5
7-Octen-2-ol, 2,6-dimethyl-	18479-58-8	1 - 5
Allyl heptanoate	142-19-8	1 - 5
Ethyl Acetoacetate	141-97-9	1 - 5

Canada

Name	CAS number	%
Benzyl benzoate	120-51-4	10 - 30
2-tert-Butylcyclohexyl acetate	88-41-5	10 - 30
Diethyl malonate	105-53-3	10 - 30
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	1222-05-5	5 - 10
3-p-Cumenyl-2-methylpropionaldehyde	103-95-7	5 - 10
Allyl heptanoate	142-19-8	1 - 5
1,1-Dimethoxy-2-Phenylethane	101-48-4	1 - 5
Ethyl Acetoacetate	141-97-9	1 - 5

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.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4. First aid measures

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 : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : May be combustible at high temperature.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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 spilled material. Do not breathe vapor 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 spilled 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).

Methods for cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled 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). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Store in accordance with local regulations. 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. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Canada

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

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.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or supplied air 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.

Hands : 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).

Eyes : 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 : 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.

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

Physical state : Liquid contained in a gelatin capsule.

Flash point : Closed cup: >93.3°C (>199.9°F) [Pensky-Martens.]

Burning time : Not applicable.

Burning rate : Not applicable.

Auto-ignition temperature : Not available.

Flammable limits : Not available.

9. Physical and chemical properties

Color : Clear.

Odor : Apple-like.

Taste : Not available.

Molecular weight : Not applicable.

Molecular formula : Not applicable.

pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Critical temperature : Not available.

Relative density : 1.06

Vapor pressure : 0.067 kPa (0.5 mm Hg) [20°C]

Vapor density : Not available.

Volatility : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

SADT : Not available.

Viscosity : Not available.

Ionicity (in water) : Not available.

Dispersibility properties : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Physical/chemical properties comments : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Incompatible materials : 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.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl benzoate	LD50 Dermal	Rabbit	4 g/kg	-
	LD50 Oral	Rat	>1 g/kg	-
2-tert-Butylcyclohexyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4600 mg/kg	-
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	LD50 Dermal	Rat	>5 g/kg	-
3-p-Cumenyl-2-methylpropionaldehyde	LD50 Dermal	Rat	>5 g/kg	-
	LD50 Oral	Rat	3810 mg/kg	-
Allyl heptanoate	LD50 Dermal	Rabbit	810 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
Ethyl Acetoacetate	LD50 Oral	Rat	3980 mg/kg	-

Chronic toxicity

There is no data available.

11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diethyl malonate	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
2-tert-Butylcyclohexyl acetate	Eyes - Severe irritant	Rabbit	-	50 Percent	-
	Skin - Moderate irritant	Rabbit	-	4 hours 100 Percent	-
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
3-p-Cumenyl-2-methylpropionaldehyde	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Human	-	48 hours 15 milligrams	-
Allyl heptanoate	Skin - Mild irritant	Human	-	48 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethyl Acetoacetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	510 milligrams	-

Sensitizer

Skin : There is no data available.

Respiratory : There is no data available.

Carcinogenicity

There is no data available.

Mutagenicity

There is no data available.

Teratogenicity

There is no data available.

Reproductive toxicity

There is no data available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Diethyl malonate	Acute LC50 10800 ug/L Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 26 to 34 days	96 hours

Persistence/degradability

There is no data available.

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

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains

13. Disposal considerations

and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group Exemption to the above classification may apply. **AERG** : Not applicable

15. Regulatory information

United States

HCS Classification : Toxic material
Irritating material
Target organ effects

U.S. Federal regulations : **TSCA 8(a) PAIR**: 3-p-cumenyl-2-methylpropionaldehyde

TSCA 8(a) IUR Exempt/Partial exemption: Not determined

TSCA 8(d) H and S data reporting: 3-p-cumenyl-2-methylpropionaldehyde

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 1,1-Dimethoxy-2-Phenylethane; Ethyl Acetoacetate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 1,1-Dimethoxy-2-Phenylethane: Fire hazard, Delayed (chronic) health hazard; Ethyl Acetoacetate: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

15. Regulatory information

	Product name	CAS number	Concentration
Form R - Reporting requirements	2-Phenoxyethyl Isobutyrate	103-60-6	5 - 10
Supplier notification	2-Phenoxyethyl Isobutyrate	103-60-6	5 - 10

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: Ethyl Acetoacetate

New York : None of the components are listed.

New Jersey : The following components are listed: Diethyl malonate; 2-Phenoxyethyl Isobutyrate

Pennsylvania : The following components are listed: 2-Phenoxyethyl Isobutyrate; Ethyl Acetoacetate

California Prop. 65

No products were found.

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. Other information

Label requirements : HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CAUSES EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) : **Health :** 2 * **Flammability :** 1 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) : **Health :** 2 **Flammability :** 1 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue mm/dd/yyy : 12/01/2011

Date of previous issue : 08/30/2008

Version : 3

Revised Section(s) : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

16. Other information

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.