


SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product identifier**
Product Name: EcoKleanz
Product Codes(s): EKZ110
Synonyms: Bio-solvent blend
REACH Registration: No data available
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
General Use: Solvent, cleaner
Uses advised against: None known
- 1.3 Details of the supplier and of the safety data sheet**
Manufacturer/Distributor
 Liquiguard Technologies, Inc.
 5807 N. Andrews Way
 Fort Lauderdale, FL 33309 USA
 +1-954-556-0996
- 1.4 Emergency telephone number:** +1-954-556-0996 (during business hours)

SECTION 2 - HAZARDS IDENTIFICATION

- 2.1 Classification of substance or mixture**
Product definition: Mixture
Classification (Regulation (EC) No 1272/2008)
 Combustible liquid, Category 4 [H227]
 Eye Irritation, Category 2A [319]
 Acute Toxicity - Inhalation, Category 4 [332]
 Specific target organ toxicity - single exposure (STOT SE 3) [H335]
- 2.2 Label Elements**
Labeling (Regulation (EC) No 1272/2008)
- Hazard Symbols:** 
- Signal Word:** Warning
- Hazard Statements:** H227 - Combustible liquid
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H335 - May cause respiratory irritation
- Precautionary Statements:**
- [Prevention]** P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
 P261 - Avoid breathing fumes, mists, vapors and spray.
 P264 - Wash hands thoroughly after using.
 P271 - Use only outdoors or in a well ventilated area.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- [Response]** P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 - Immediately call a POISON CENTER or doctor if you feel unwell.
 P337 + P313 - If eye irritation persists: Get medical attention.
- [Storage]** P403 + P235 - Store in well-ventilated place. Keep cool.
 P405 - Store locked up.
- [Disposal]** P501 - Dispose of contents in accordance with national/local regulations.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances**
 Not applicable
- 3.2 Mixtures**
Chemical characterization (preparation)

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
<65	Propyl propionate	106-36-5	203-389-7	607-030-00-9	R10; Xn, R20

Proprietary ingredients are low toxicity. The identities of the proprietary components in this product are a trade secret (29 CFR 1910.1200(i)) and are available to the attending physician or paramedical personnel in case of emergency.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product vapor or mist causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention immediately.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting upper and lower lids. Remove contact lenses, if present, after the first 5 minutes and continue rinsing. Obtain immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash affected area with soap and water. Wash contaminated clothing and shoes thoroughly before reuse. Seek prompt medical attention irritation persists or if a rash develops.

Ingestion: Rinse mouth with water. Remove dentures, if any. 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: May cause moderate to severe eye irritation. Symptoms can include redness, irritation, pain, blurred vision and tearing.

Skin: May cause mild to moderate skin irritation. Symptoms may include redness, irritation and possible rash.

Inhalation: May cause irritation of the respiratory system. Inhalation of high concentrations of vapors may cause sore throat, coughing, shortness of breath, headaches, nausea, central nervous system depression, dizziness, narcosis, drowsiness and unconsciousness.

Chronic: Repeated and prolonged contact with skin may result in defatting of skin resulting in drying, cracking and dermatitis. Persons with existing skin disorders or eye problems or impaired liver, kidney or respiratory function may be more susceptible to the effects of this material.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use media such as water fog, water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable methods of extinction: Using water jets or streams may spread the fire.

5.2 Special hazards arising from the substance or mixture

Combustible material. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at ambient temperatures. Pay attention to flashback. Development of hazardous combustion gases or vapors is possible in the event of a fire. Symptoms of overexposure to these gases may not be apparent. Seek medical advice.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control run-off water to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing designated in Section 8. Remove all sources of ignition. Ventilate the area.

6.2 Environmental precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover with a large quantity of inert absorbent. Do not use combustible materials as absorbent (e.g. saw dust).

Collect product using non-sparking tools and place into approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with soap and water.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Observe label precautions. Wear all appropriate protective equipment specified in Section 8. Keep containers closed when not in use.

Advice on protection against fire and explosion

Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Protect against physical damage.

7.2 Conditions for safe storage, including any incompatibilities

Keep in cool, dry, ventilated storage areas in closed containers. Transfer only to approved containers having correct labeling. Containers that have been opened should be carefully resealed and kept upright to prevent leakage. Separate from incompatible materials. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for this product. Do not take internally. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure values.

8.2 Exposure controls

Engineering Measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking or using the lavatory.

Eye/face protection: Wear protective goggles or safety glasses with unperforated side shields during use. Refer to 29 CFR 1910.133, ANSI Z87.1 or European Standard EN 166.

Hand Protection: Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Other protective equipment: Protective clothing. Protective boots, if the situation requires.

Respiratory Protection: Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls: Do not empty into drains.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Sharp, pungent
Odor Threshold	Not determined
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH (10% in IPA)	7
Freezing/Melting Point, Range	Not determined
Initial Boiling Point	122-124°C (252-255°F)
Evaporation Rate	0.21 (n-BuOAc = 1)
Flammability (solid, gas)	Not applicable
Flash Point	60°C (140°F) CC
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	1.6 mm Hg @ 20° C
Vapor Density	No data available
Specific Gravity	0.952
Viscosity	Not determined
Solubility in Water	Complete
Partition Coefficient: n-octanol/water	<2.0 (calculated)
Volatiles by Volume @ 70° F	100%

9.2 Other data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air.

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Extreme temperatures, heat, sources of ignition, contact with incompatible materials

10.5 Incompatible materials

Strong oxidizing agents, acids, bases, reducing agents

10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon. Produces lactic acid via hydrolysis or in alkaline environments.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

Expected to have low toxicity

Acute inhalation toxicity

Expected to have low inhalation toxicity

Acute dermal toxicity

Expected to have low dermal toxicity

Skin irritation

May cause skin irritation

Eye irritation

Causes moderate to severe eye irritation

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

May cause respiratory irritation

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available.

11.2 Further information

Chronic Effects: The components in this product are not listed as carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding regarding mutagenicity and/or teratogenicity of this product, nor is there any available data that indicates it causes adverse developmental and/or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Product is expected to have low toxicity to aquatic organisms.

12.2 Persistence and degradability

Material is expected to be biodegradable.

12.3 Bioaccumulation potential

Not expected to bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Methods of disposal: The generation of waste should be avoided or minimized whenever 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 this product may meet the criteria for a hazardous waste.

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

USA DOT and Canadian TGD

Proper Shipping Name:	Flammable Liquid, N.O.S. (proprietary material)
Hazard Class:	3
UN/NA:	1993
Packing Group:	III

IMO/IMDG
Proper Shipping Name: Flammable Liquid, N.O.S. (proprietary material)
Hazard Class: 3
UN/NA: 1993
Packing Group: III
Marine Pollutant: No
EMS Number: F-E, S-D

IAAO/IATA
Proper Shipping Name: Flammable Liquid, N.O.S. (proprietary material)
Hazard Class: 3
UN/NA: 1993
Packing Group: III

RID/ADR
Proper Shipping Name: Flammable Liquid, N.O.S. (proprietary material)
Hazard Class: 3
UN/NA: 1993
Packing Group: III

Marine Pollutant: No



SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material contains "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard (28 CFR 1910.1200). Flammable, Irritant

OSHA Process Safety Management Standard: No chemical in this product is regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: No chemical in this product is regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is subject to TSCA 12(b) Export Notification.

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Fire Hazard, Acute Health Hazard

SARA 313 Information: None of the chemicals in this product exceed the threshold (de minimis) reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance:

No components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification:

No components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): No components of the product exceed the threshold (de minimis) reporting levels for hazardous wastes established by CERCLA.

Clean Air Act (CAA)

This product does not contain any chemicals that are listed as Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depletors.

This product does not contain any Class 2 Ozone depletors.

Clean Water Act (CWA)

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains no chemical(s) known to the state of California to cause cancer or other reproductive harm.

Other U.S. State Inventories:

Propyl propionate (CAS #106-36-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/ Air Pollutants lists: MA, PA.

A proprietary ingredient of this product is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/ Air Pollutants lists: MA, NJ, PA.

Canada

WHMIS Hazard Symbol and Classification: None allocated



B-3 - Flammable liquids with flash points greater than 38°C (100°F) but inferior to 93°C (199.4°F).



D-2B - Eye irritation

Canadian Controlled Products Regulations (CPR): 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.

Canadian Ingredient Disclosure List (IDL): Propyl propionate is listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): Material is not listed on the NPRI.

European Economic Community

Labeling (67/548/EEC to 1999/45/EC)



Xi - Irritant

Risk Phrases: R36/37 - Irritating to eyes and respiratory system.

Safety Phrases: S1/2 - Keep locked up and out of the reach of children.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 - Wear suitable gloves and eye/face protection.
S46 - If swallowed, seek medical advice immediately and show this container or label.

WGK, Germany (Water danger/protection): 1

Chemical inventory Lists

Country	Inventory Name	Inventory Listing*
Canada:	Domestic Substance List (DSL).	Yes
Canada:	Non-Domestic Substance List (NDSL).	No
Europe:	Inventory of New and Existing Chemicals (EINECS)	Yes
United States:	Toxic Substance Control Act (TSCA)	Yes
Australia:	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand:	New Zealand Inventory of Chemicals (NZIoC)	Yes
China:	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan:	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea:	Existing Chemicals List (ECL)	Yes
Philippines:	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

**"Yes" indicates that all components of this product are in compliance with the inventory requirements administered by the governing country.
**"No" indicates that one or more components of this product are not on the inventory and are not exempt from listing.

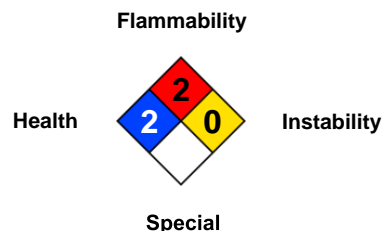
SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

Health	2
Flammability	2
Physical Hazard	0
Personal Protection	C

HMIS & NFPA Hazard Rating Legend
* = Chronic Health Hazard 2 = MODERATE
0 = INSIGNIFICANT 3 = HIGH
1 = SLIGHT 4 = EXTREME

National Fire Protection Association (NFPA)



Full Text of Risk (R) – Phrases Referenced in Section 3.

R10 - Flammable
R20 - Harmful by inhalation

The information herein is given in good faith and is believed to be accurate and correct; however, no warranty, expressed or implied, is made. Liquiguard Technologies, Inc. assumes no responsibility for personal injury or property damage that may arise from the use of this material since the conditions of handling and use are beyond our control. It is the responsibility of the user to comply with all Federal, State and local laws and regulations regarding use of this product. Vendees or users assume all risks associated with the use of this material.

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