



Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

#### Other information

- Causes mild skin irritation
- Harmful to aquatic life with long lasting effects
- Toxic to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
ETHYL ALCOHOL	64-17-5	90-100%	*
LIMONENE	5989-27-5	1-5%	*
PINENES	80-56-8	<1	*
CITRAL	5392-40-5	<1	*

### 4. FIRST AID MEASURES

#### First aid measures for different exposure routes

<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.
<b>Self-protection of the first aider</b>	Use personal protective equipment.

#### Most important symptoms/effects, acute and delayed

**Main Symptoms** Hives.

#### Indication of immediate medical attention and special treatment needed, if necessary

**Note to physicians** May cause sensitization in susceptible persons.

### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization in susceptible persons.

**Explosion data**

**Sensitivity to Mechanical Impact** none.

**Sensitivity to Static Discharge** Yes.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment. Avoid contact with eyes and skin.

**Environmental precautions**

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and materials for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation. Use personal protective equipment as required.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

**Incompatible products** None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ETHYL ALCOHOL 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
PINENES	TWA: 20 ppm	-	

80-56-8			
CITRAL 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	
NERAL 106-26-3	TWA: 5 ppm inhalable fraction and vapor S*	-	
ETHYL ACETATE 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup>
METHYL N-AMYL KETONE FCC (2-Heptanone) 110-43-0	TWA: 50 ppm	TWA: 100 ppm TWA: 465 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 465 mg/m <sup>3</sup>	IDLH: 800 ppm TWA: 100 ppm TWA: 465 mg/m <sup>3</sup>

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Exposure controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tightly fitting safety goggles.

**Skin and body protection** Chemical resistant apron.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** When using, do not eat, drink or smoke. Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

<b>Physical state</b>	liquid
<b>Appearance</b>	clear
<b>Odor</b>	characteristic of lime bakery notes
<b>Color</b>	colorless to yellow

<u>Property</u>	<u>Values</u>	<u>Method</u>
<b>pH</b>		No information available
<b>Melting/freezing point</b>		FCC Method
<b>Boiling point/boiling range</b>		FCC Method
<b>Flash Point</b>	18 °C / 65 °F	Closed cup
<b>Evaporation rate</b>	No information available	No information available
<b>Flammability (solid, gas)</b>	No information available	No information available
<b>Flammability Limits in Air</b>		No information available
<b>Upper flammability limit</b>	No information available	
<b>lower flammability limit</b>	No information available	
<b>Vapor pressure mm Hg 20°C</b>		No information available
<b>Vapor density</b>		No information available
<b>Specific Gravity @ 25C</b>		FCC Method
0.8088 - 0.8388		
<b>Specific Gravity @ 20C</b>	0.8118 - 0.8418	FCC Method
<b>Refractive Index</b>	1.3572 - 1.3872	FCC Method
<b>Water solubility</b>	Practically insoluble	
<b>Solubility in other solvents</b>		No information available
<b>Partition coefficient: n-octanol/water</b>		No information available
<b>Autoignition temperature</b>	No information available	No information available
<b>Decomposition temperature</b>		No information available
<b>Viscosity, kinematic</b>	No information available	No information available
<b>Viscosity, dynamic</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	

### Other information

<b>Softening point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC Content(%)</b>	No information available
<b>Density VALUE</b>	No information available
<b>Bulk Density VALUE</b>	No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

### Conditions to Avoid

Extremes of temperature and direct sunlight.

### Incompatible Materials

None known based on information supplied.

**Hazardous Decomposition Products**

None known based on information supplied.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known information
<b>Inhalation</b>	There is no data available for this product.
<b>Eye contact</b>	There is no data available for this product.
<b>Skin contact</b>	There is no data available for this product.
<b>Ingestion</b>	There is no data available for this product.

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
ETHYL ALCOHOL 64-17-5	7060 mg/kg ( Rat )	-	124.7 mg/L ( Rat ) 4 h
LIMONENE 5989-27-5	4400 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	-
PINENES 80-56-8	2100 mg/kg ( Rat )	5000 mg/kg ( Rat )	-
CITRAL 5392-40-5	4950 mg/kg ( Rat )	2250 mg/kg ( Rabbit ) 2000 mg/kg ( Rat )	-

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.  
**Germ Cell Mutagenicity** No information available.  
**Carcinogenicity** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
ETHYL ALCOHOL 64-17-5	A3	Group 1	Known	X
LIMONENE 5989-27-5		Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists)  
A3 - Animal Carcinogen  
IARC (International Agency for Research on Cancer)  
Group 1 - Carcinogenic to Humans  
Group 3 - Not Classifiable as to Carcinogenicity in Humans  
NTP (National Toxicology Program)  
Known - Known Carcinogen  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
X - Present

**Reproductive toxicity** No information available.  
**Specific target organ systemic toxicity (single exposure)** No information available.  
**Specific target organ systemic toxicity (repeated exposure)** No information available.  
**Chronic toxicity** Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. May cause adverse liver effects. Contains a known or suspected reproductive toxin.

**Target Organ Effects**

Blood, Central nervous system, Eyes, Liver, Reproductive system, Respiratory system, Skin.

**Aspiration hazard**

No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

. mg/kg mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

0.37786000001% of the mixture consists of component(s) of unknown hazards to the aquatic environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

Chemical Name	log Pow
ETHYL ALCOHOL 64-17-5	-0.32
PINENES 80-56-8	4.1
CITRAL 5392-40-5	2.76

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment**

**Waste Disposal Methods**

It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.

**Contaminated packaging**

Do not reuse container.

**US EPA Waste Number**

D001 U112 U203

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
ETHYL ALCOHOL 64-17-5	Toxic Ignitable
LIMONENE 5989-27-5	Toxic

**14. TRANSPORT INFORMATION**

**DOT**

UN/ID No

1197

Proper shipping name           EXTRACTS, FLAVOURING, LIQUID  
Hazard class                    3  
Packing Group                 II  
ERG Code                        127

**ICAO/IATA**

UN/ID No                        1197  
Proper shipping name           EXTRACTS, FLAVOURING, LIQUID  
Hazard class                    3  
Packing Group                 II  
ERG Code                        127

**IMDG / IMO**

UN/ID No                        1197  
Proper shipping name           EXTRACTS, FLAVOURING, LIQUID  
Hazard class                    3  
Packing Group                 II

**15. REGULATORY INFORMATION**

**International Inventories**

TSCA                            -  
DSL/NDSL                       -  
EINECS/ELINCS                -  
ENCS                            -  
IECSC                           -  
KECL                            -  
PICCS                           -  
AICS                             -

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
AICS - Australian Inventory of Chemical Substances

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard            Yes  
Chronic Health Hazard          no  
Fire Hazard                     Yes  
Sudden Release of Pressure Hazard   no  
Reactive Hazard                no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40



CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
ETHYL ALCOHOL - 64-17-5	Carcinogen
SAFROLE - 94-59-7	Developmental Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
ETHYL ALCOHOL 64-17-5	X	X	X
PINENES 80-56-8	X	X	X
SAFROLE 94-59-7	X	X	X
TERPINOLENE 586-62-9	X		

**U.S. EPA Label information**

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	Health Hazard 2	Flammability 4	Instability 0	Physical and chemical hazards * Personal protection b
<b><u>HMIS</u></b>	Health Hazard 2	Flammability 4	Physical Hazard 0	

**Revision Date** 01-Sep-2016  
**Revision Note** No information available

**Revision#** 1

**WARNING/DISCLAIMER:**

Apex Flavors, Inc.'s products are sold exclusively for use in food and drink for human consumption. These products have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, and electronic cigarettes or similar devices (collectively "E-Cigarettes"). In supplying this product(s), Apex Flavors, Inc. instructs, and purchasing recipient confirms, that this product(s) will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof. Recipients of our products that use them outside of their intended use of food or drink do so at their own risk and without warranty, either expressed or implied, from Apex Flavors, Inc. or its suppliers. The user assumes all liability for loss, injury, damage, or expense resulting from such uses.

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