

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : LEMON FLAVOR-PG
CAS-No. : N/A
Product code : TBVAP46

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

EXTRACT CONSULTANTS, LLC.
TERPENES - FLAVORS - BASES
PO BOX 11433, DENVER, CO 80211
www.extractconsultants.com
INFORMATION: 1-888-541-9089

1.4. Emergency telephone number

Emergency number : Chemtrec - USA: 800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 3	Flammable liquid and vapour
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Aspiration hazard Category 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Flammable liquid and vapour
May be fatal if swallowed and enters airways
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation

Precautionary statements (GHS-US) :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center or doctor
If on skin: Wash with plenty of water
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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Specific treatment (see supplemental first aid instruction on this label)
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use media other than water to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
LEMON ESSENCE SICILIAN	(CAS-No.) 8008-56-8	10 - 25	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
BENZYL ALCOHOL	(CAS-No.) 100-51-6	5 - 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
ETHYL VANILLIN	(CAS-No.) 121-32-4	5 - 10	Eye Irrit. 2B, H320
LEMON OIL	(CAS-No.) 84929-31-7	5 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
ORANGE TERPENES	(CAS-No.) 68647-72-3	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
CITRAL	(CAS-No.) 5392-40-5	1 - 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
DECANAL	(CAS-No.) 112-31-2	1 - 5	Flam. Liq. 4, H227 Eye Irrit. 2, H319
10-Undecenal	(CAS-No.) 112-45-8	1 - 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
2-METHYLUDECANAL	(CAS-No.) 110-41-8	1 - 5	Skin Irrit. 2, H315 Skin Sens. 1B, H317
ETHYL MALTOL	(CAS-No.) 4940-11-8	1 - 5	Acute Tox. 4 (Oral), H302
d-Limonene	(CAS-No.) 5989-27-5	0.1 - 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : 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.

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First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : Risk of lung edema.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapour.
Reactivity : Flammable liquid and vapour.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-METHYLUNDECANAL (110-41-8)

Not applicable

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CITRAL (5392-40-5)		
ACGIH	ACGIH TWA (ppm)	5 ppm
ACGIH	Remark (ACGIH)	Body weight eff; URT irr; eye dam; Skin; DSEN; A4 (Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories)
LEMON ESSENCE SICILIAN (8008-56-8)		
Not applicable		
ORANGE TERPENES (68647-72-3)		
Not applicable		
d-Limonene (5989-27-5)		
Not applicable		
LEMON OIL (84929-31-7)		
Not applicable		
ETHYL VANILLIN (121-32-4)		
Not applicable		
ETHYL MALTOL (4940-11-8)		
Not applicable		
BENZYL ALCOHOL (100-51-6)		
Not applicable		
DECANAL (112-31-2)		
Not applicable		
10-Undecenal (112-45-8)		
Not applicable		

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : COLORLESS TO YELLOW LIQUID
Odor : LEMON, CITRUS ODOR

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Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 51 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.036 (0.959 - 1.100)
Solubility	: Soluble.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Refractive index : 1.467 (1.452 - 1.488)

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

CITRAL (5392-40-5)	
ATE US (dermal)	2250 mg/kg body weight
ORANGE TERPENES (68647-72-3)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Weight of evidence, Dermal)
d-Limonene (5989-27-5)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral)

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d-Limonene (5989-27-5)	
LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Weight of evidence, Dermal)

ETHYL VANILLIN (121-32-4)	
ATE US (oral)	3000 mg/kg body weight

ETHYL MALTOL (4940-11-8)	
LD50 oral rat	1150 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
ATE US (oral)	1150 mg/kg body weight

BENZYL ALCOHOL (100-51-6)	
LD50 oral rat	1620 mg/kg bw/day (Rat, Male, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
LC50 inhalation rat (mg/l)	> 4.178 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value, Inhalation (aerosol))
ATE US (oral)	1620 mg/kg body weight
ATE US (dermal)	2500 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

ORANGE TERPENES (68647-72-3)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified

Specific target organ toxicity – repeated exposure	: Not classified
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Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Risk of lung edema.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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ORANGE TERPENES (68647-72-3)	
LC50 fish 1	720 µg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	0.36 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

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d-Limonene (5989-27-5)	
LC50 fish 1	720 µg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	0.36 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

BENZYL ALCOHOL (100-51-6)	
LC50 fish 1	460 mg/l (EPA OPP 72-1, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 Daphnia 1	230 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Fresh water, Experimental value, GLP)
ErC50 (algae)	770 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

ORANGE TERPENES (68647-72-3)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

d-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

ETHYL MALTOL (4940-11-8)	
Persistence and degradability	Biodegradability in water: no data available.

BENZYL ALCOHOL (100-51-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.6 g O ₂ /g substance
Chemical oxygen demand (COD)	2.4 g O ₂ /g substance
ThOD	2.5 g O ₂ /g substance

12.3. Bioaccumulative potential

ORANGE TERPENES (68647-72-3)	
BCF fish 1	864.8 - 1022 (Pisces, QSAR, Fresh weight)
Log Pow	4.38 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

d-Limonene (5989-27-5)	
BCF fish 1	864.8 - 1022 (Pisces, QSAR, Fresh weight)
Log Pow	4.38 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

ETHYL MALTOL (4940-11-8)	
Bioaccumulative potential	No bioaccumulation data available.

BENZYL ALCOHOL (100-51-6)	
Log Pow	1 - 1.1 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ORANGE TERPENES (68647-72-3)	
Ecology - soil	Adsorbs into the soil.

d-Limonene (5989-27-5)	
Ecology - soil	Adsorbs into the soil.

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BENZYL ALCOHOL (100-51-6)	
Surface tension	39 mN/m (20 °C)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG) : UN 1266 PERFUMERY PRODUCTS, 3, III
UN-No. (IMDG) : 1266
Proper Shipping Name (IMDG) : PERFUMERY PRODUCTS
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 1266 Perfumery products, 3, III
UN-No. (IATA) : 1266
Proper Shipping Name (IATA) : Perfumery products
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

2-METHYLUNDECANAL (110-41-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
CITRAL (5392-40-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LEMON ESSENCE SICILIAN (8008-56-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
ORANGE TERPENES (68647-72-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
d-Limonene (5989-27-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LEMON OIL (84929-31-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
ETHYL VANILLIN (121-32-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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ETHYL MALTOL (4940-11-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

BENZYL ALCOHOL (100-51-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

DECANAL (112-31-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

10-Undecenal (112-45-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

2-METHYLUNDECANAL (110-41-8)

Listed on the Canadian DSL (Domestic Substances List)

CITRAL (5392-40-5)

Listed on the Canadian DSL (Domestic Substances List)

LEMON ESSENCE SICILIAN (8008-56-8)

Listed on the Canadian DSL (Domestic Substances List)

ORANGE TERPENES (68647-72-3)

Listed on the Canadian DSL (Domestic Substances List)

d-Limonene (5989-27-5)

Listed on the Canadian DSL (Domestic Substances List)

LEMON OIL (84929-31-7)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL VANILLIN (121-32-4)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL MALTOL (4940-11-8)

Listed on the Canadian DSL (Domestic Substances List)

BENZYL ALCOHOL (100-51-6)

Listed on the Canadian DSL (Domestic Substances List)

DECANAL (112-31-2)

Listed on the Canadian DSL (Domestic Substances List)

10-Undecenal (112-45-8)

Listed on the Canadian DSL (Domestic Substances List)


EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

 **WARNING:** This product can expose you to myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Revision date : 03/07/2019

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Full text of H-phrases:

H226	Flammable liquid and vapour
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H332	Harmful if inhaled

SDS US (GHS HazCom 2012) - Extract Consultants

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product