

APEX FLAVORS, INC.



SAFETY DATA SHEET.

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 01-Aug-2023

Version 1

1. Identification

Product identifier

Product name LEMON EXTRACT, NATURAL WONF

Other means of identification

Product Code(s) 1364EXPT

CAS No. NA

FEMA Numbers NA

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer

Apex Flavors, Inc.
1361 Brass Mill Rd
Suite E
Belcamp, MD 21017
(410) 565-6600

Emergency telephone number

Emergency telephone Chemtrec: 1-800-424-9300 for US/ Outside US Chemtel 813-248-0585

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
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Our ingredients have not been tested, nor have they been determined safe, for inhalation or use in any electronic smoking devices, electronic nicotine delivery systems, electronic cigarettes, or other similar devices (collectively "E-Cigarettes") or in any E-Liquids used with E-Cigarettes. By receiving Apex Flavors, Inc ingredients, the recipient confirms that they will not use these ingredients in connection with the manufacture and distribution of E-Cigarettes, E-Liquids or any component thereof. WE DISCLAIM, TO THE FULLEST EXTENT PERMITTED BY LAW, ALL WARRANTIES, EXPRESS OR IMPLIED, and disclaim all liability in connection with the use of our ingredients in connection with E-Cigarettes and E-Liquids. All such risks are assumed by you and the user.

Issuing date 01-Aug-2023

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Carcinogenicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Danger****Hazard statements**

Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 May cause cancer

**Appearance** clear**Physical state** Liquid**Aroma** characteristic of lemon peel**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 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
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

- 90.2 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 91.2 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

May be harmful if swallowed. May be harmful in contact with skin. Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

EC No (EU Index No)

This safety data sheet was created pursuant
 to the requirements of:

Substance

Chemical name	CAS No.	Weight-%	Trade secret
1-methyl-4-(1-methylethenyl)-cyclohexene (LIMONENE)	5989-27-5	5-10%	*
PINENES	80-56-8	1-5%	*
GAMMA-TERPINENE	99-85-4	1-5%	*
3,7-dimethylocta-2,6-dienal (CITRAL)	5392-40-5	<1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures**Description of first aid measures**

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

EC No (EU Index No)
This safety data sheet was created pursuant to the requirements of:

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection**Control parameters**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
PINENES 80-56-8	TWA: 20 ppm	-	-
3,7-dimethylocta-2,6-dienal (CITRAL) 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	-

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

EC No (EU Index No)
This safety data sheet was created pursuant
to the requirements of:

9. Physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Method</u>
pH	No data available	None known
Melting/freezing point	No data available	None known
Boiling point/boiling range	No data available	None known
Flash Point	81 °C / 177 °F	Closed cup
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air	None known	
Upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor pressure mm Hg 20°C	No data available	None known
Vapor density	No data available	None known
Relative density		
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	
Remarks	None known	
Decomposition Temperature VALUE		
Remarks	None known	
Viscosity, kinematic	No data available	None known
Viscosity, dynamic	No data available	None known

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	clear
Color	colorless
Aroma	characteristic of lemon peel
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Method</u>
pH	No data available	None known
Melting/freezing point	No data available	None known
Boiling point/boiling range	No data available	None known
Flash Point	81 °C / 177 °F	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		None known
Upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor pressure mm Hg 20°C	No data available	None known
Vapor density	No data available	None known
Relative density		None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition Temperature VALUE		None known
Viscosity, kinematic	No data available	None known
Viscosity, dynamic	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular Weight	No information available
VOC content	No information available

EC No (EU Index No)

This safety data sheet was created pursuant to the requirements of:

Density VALUE	No information available
Bulk Density VALUE	No information available
Specific Gravity @ 25C	0.9906 - 1.1006 FCC Method
Specific Gravity @ 20C	0.9936 - 1.1036 FCC
Refractive Index @ 20C	Method 1.4232 - 1.4432 FCC Method

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to Avoid	None known based on information supplied.
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

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Acute toxicity

Numerical measures of toxicity

No information available

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

ATEmix (oral)	3,945.40 mg/kg
ATEmix (dermal)	2,340.40 mg/kg

90.2 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 91.2 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 99.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1-methyl-4-(1-methylethenyl)-cy clohexene (LIMONENE) 5989-27-5	4400 mg/kg (Rat)	2000 mg/kg (Rabbit)	-
PINENES 80-56-8	2100 mg/kg (Rat)	5000 mg/kg (Rat)	-

EC No (EU Index No)

This safety data sheet was created pursuant
to the requirements of:

GAMMA-TERPINENE 99-85-4	3650 mg/kg (Rat)	-	-
3,7-dimethylocta-2,6-dienal (CITRAL) 5392-40-5	4950 mg/kg (Rat)	2250 mg/kg (Rabbit) 2000 mg/kg (Rat)	-

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
1-methyl-4-(1-methylethyl)-cyclohexene (LIMONENE) 5989-27-5	-	Group 3	-	-

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1-methyl-4-(1-methylethyl)-cyclohexene (LIMONENE) 5989-27-5	-	0.619-0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50	-	-
PINENES 80-56-8	-	0.28: 96 h Pimephales promelas mg/L LC50	-	41: 48 h Daphnia magna mg/L LC50

EC No (EU Index No)

This safety data sheet was created pursuant to the requirements of:

		static		
3,7-dimethylocta-2,6-dienal (CITRAL) 5392-40-5	16: 72 h Desmodesmus subspicatus mg/L EC50 19: 96 h Desmodesmus subspicatus mg/L EC50	4.6-10: 96 h Leuciscus idus mg/L LC50 static	EC50 = 2100 mg/L 30 min	7: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
PINENES 80-56-8	4.1
3,7-dimethylocta-2,6-dienal (CITRAL) 5392-40-5	2.76

Other adverse effects No information available.

13. Disposal considerations

Waste treatment

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

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

14. Transport information

DOT/ADR Not regulated

15. Regulatory information

International Inventories

TSCA Complies

DSL/NDSL Complies

EINECS/ELINCS Complies

ENCS Complies

IECSC Complies

KECL Complies

PICCS Complies

AIIC Complies

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This safety data sheet was created pursuant to the requirements of:

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - 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
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

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

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (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.

US State Regulations**California Proposition 65**

This product is not, to the best of our knowledge, subject to the labeling requirements under California Proposition 65

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
PINENES 80-56-8	X	X	X

U.S. EPA Label information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 1	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection X

Abbreviations, acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EC No (EU Index No)

This safety data sheet was created pursuant to the requirements of:

TWA:	Time weighted average	STEL:	Short term exposure limit
Ceiling:	Maximum limit value:	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision Date 01-Aug-2023

Revision Note No information available.

WARNING/DISCLAIMER:

Our ingredients have not been tested, nor have they been determined safe, for inhalation or use in any electronic smoking devices, electronic nicotine delivery systems, electronic cigarettes, or other similar devices (collectively "E-Cigarettes") or in any E-Liquids used with E-Cigarettes. By receiving Apex Flavors, Inc ingredients, the recipient confirms that they will not use these ingredients in connection with the manufacture and distribution of E-Cigarettes, E-Liquids or any component thereof. WE DISCLAIM, TO THE FULLEST EXTENT PERMITTED BY LAW, ALL WARRANTIES, EXPRESS OR IMPLIED, and disclaim all liability in connection with the use of our ingredients in connection with E-Cigarettes and E-Liquids. All such risks are assumed by you and the user.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

EC No (EU Index No)

This safety data sheet was created pursuant to the requirements of: