



This safety data sheet complies with the requirements of:
 OSHA CFR Title 29 CFR 1910.1200

Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code(s) 541, 541BEV, 541ICR, 541TTB
Product name LEMON ELDER FLOWER EXTRACT, NATURAL WONF

UN/ID No 1197

Recommended use of the chemical and restrictions on use

Recommended Use No information available.
Uses advised against No information available

Manufacturer Apex Flavors, Inc.
 1371 Brass Mill Rd Suite A
 Belcamp, Md 21017
 410-565-6600

Emergency telephone

Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2A
Skin Sensitization	Category 1
Carcinogenicity	Category 1A
Flammable liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Danger

Hazard Statements
 Causes serious eye irritation
 May cause an allergic skin reaction
 May cause cancer
 Highly flammable liquid and vapor

Appearance liquid **Physical state** liquid **Aroma** No information available

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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

- Toxic 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	50-90%	*
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

General advice	Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.
Eye contact	If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin contact	Wash off immediately with plenty of water. Wash off immediately with soap and plenty of water.
Inhalation	If symptoms persist, call a physician. Move to fresh air.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.
Self-protection of the first aider	Remove all sources of ignition.

Most important symptoms/effects, acute and delayed

Main Symptoms Hives.

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

Note to physicians Treat symptomatically. May cause sensitization in susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use. Dry chemical. Carbon dioxide CO₂. Water spray. Alcohol-resistant foam.

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

Keep product and empty container away from heat and sources of ignition. Risk of ignition. 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

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment.

Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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

Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. 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 ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
GLYCERINE 56-81-5	-	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	
PINENES 80-56-8	TWA: 20 ppm	-	
ACETIC ACID 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³
CITRAL 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	
ETHYL ACETATE 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³
Trade Secret	STEL: 100 ppm TWA: 50 ppm	-	
NERAL 106-26-3	TWA: 5 ppm inhalable fraction and vapor S*	-	
ACETALDEHYDE 75-07-0	Ceiling: 25 ppm	TWA: 200 ppm TWA: 360 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 180 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 270 mg/m ³	IDLH: 2000 ppm
ISOAMYL ACETATE 123-92-2	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 525 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m ³	IDLH: 1000 ppm TWA: 100 ppm TWA: 525 mg/m ³
Trade Secret	TWA: 10 ppm	-	

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 must 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. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Physical state	liquid
Appearance	liquid
Aroma	No information available
Color	No information available

<u>Property</u>	<u>Values</u>	<u>Method</u>
pH		No information available
Melting/freezing point		FCC Method
Boiling point/boiling range		FCC Method
Flash Point	20 °C / 68 °F	Closed cup
Evaporation rate	No information available	No information available
Flammability (solid, gas)	No information available	No information available
Flammability Limits in Air		No information available
Upper flammability limit	No information available	
lower flammability limit	No information available	
Vapor pressure mm Hg 20°C		No information available
Vapor density		No information available
Specific Gravity @ 25C	0.8135 - 0.8335	FCC Method
Specific Gravity @ 20C	0.8165 - 0.8365	FCC Method
Refractive Index @ 20C	1.3575 - 1.3775	FCC Method
Water solubility	Practically insoluble	
Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature	No information available	No information available
Decomposition temperature		No information available
Viscosity, kinematic	No information available	No information available
Viscosity, dynamic	No information available	
Explosive properties	No information available	
Oxidizing Properties	No information available	

Other information

Softening point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density VALUE	No information available
Bulk Density VALUE	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

Heat, flames and sparks.

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

Product Information Product does not present an acute toxicity hazard based on known information

Inhalation There is no data available for this product.

Eye contact There is no data available for this product.

Skin contact There is no data available for this product.

Ingestion 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 May cause adverse liver effects. Contains a known or suspected reproductive toxin. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

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

Toxic to aquatic life with long lasting effects

3.86726% 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

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/ADR

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
ACETALDEHYDE - 75-07-0	Carcinogen
MYRCENE - 123-35-3	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
ETHYL BUTYRATE 105-54-4	X	X	X
Trade Secret	X		

U.S. EPA Label information

16. OTHER INFORMATION

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

Revision Date 13-Sep-2021
Revision Note No information available

Revision# 1

WARNING/DISCLAIMER:

The ingredients/flavors provided by Apex have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, electronic cigarettes or other similar devices (collectively "E-Cigarettes"). In supplying ingredients/flavors, Apex instructs, and by receiving such ingredients/flavors recipient confirms, that the ingredients/flavors will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof.

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.

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