

This safety data sheet was created pursuant to the requirements of:
 US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS
 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous
 Products Regulation (HPR)

Revision date 13-Feb-2024

Revision Number 1

1. Identification

Product identifier

Product Name Lemonade Type, Natural Flavor Blend

Other means of identification

Product Code(s) SC-ITEM 1254

UN number or ID number UN1197

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Flavors

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Apex Flavors, Inc.
 1361 Brass Mill Rd Suite E
 Belcamp, MD 21017-1239
 United States
 (410) 565-6600

E-mail address sds@apexflavors.com

Emergency telephone number

Company Phone Number 410-565-6600

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

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

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause respiratory irritation. May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Do not breathe dust, fume, gas, mist, vapors and spray.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.
Specific treatment (see .? on this label).

Eyes

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 and attention.

Skin

IF ON SKIN: Wash with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice and attention.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant.

Other information

Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE)	64-17-5	60.00 - 80.00	-	-
Trade secret	Trade secret	<1.00	-	-

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Effects of Exposure	May cause cancer. May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. Mutagenic effects. Causes damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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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** Product is or contains a sensitizer. May cause sensitization by skin contact.
- 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

Personal precautions, protective equipment and emergency procedures

- Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- Other information** Refer to protective measures listed in Sections 7 and 8.

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. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

8. Exposure controls/personal protection

Control parameters
Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³

		(vacated) TWA: 1900 mg/m ³	
Trade secret	TWA: 5 ppm inhalable fraction and vapor S*	-	-

Chemical name	Alberta	British Columbia	Ontario	Quebec
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	TWA: 1000 ppm TWA: 1880 mg/m ³	STEL: 1000 ppm	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1880 mg/m ³

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

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 Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance No information available
Color light yellow
Odor Lemon
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	21 C. 70 F.	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive	No data available	

limits		
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	0.8777 - 0.89470	None known
Water solubility	Soluble in water	None known
Solubility(ies)	Water, ethanol	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	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
Liquid Density	No information available
Bulk density	No information available
Specific Gravity @ 25C	0.87470 - 0.89470
Specific Gravity @ 20C	0.8777 - 0.8977
Refractive Index @ 20C	1.35870 - 1.37870

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	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral)	11,573.80 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	108,515.40 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	7060 mg/kg (Rat)	-	124.7 mg/L (Rat) 4 h
Trade secret	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 Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	A3	Group 1	Known	X

Legend

- ACGIH (American Conference of Governmental Industrial Hygienists)**
- A3 - Animal Carcinogen
- IARC (International Agency for Research on Cancer)**
- Group 1 - Carcinogenic to Humans
- NTP (National Toxicology Program)**
- Known - Known Carcinogen
- Occupational Safety and Health Administration of the US Department of Labor**
- X - Present

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn

child.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	-	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
Trade secret	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	-	7: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	-0.32
Trade secret	2.76

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

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

14. Transport information**DOT**

UN number or ID number	UN1197
Proper shipping name	Extracts, flavoring, liquid
Transport hazard class(es)	3
Packing group	II
DOT Marine Pollutant	I
Marine pollutant	BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE)
Description	UN1197, Extracts, flavoring, liquid, 3, II, Marine pollutant (BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE))
Special Provisions	149, IB2, T4, TP1, TP8
Emergency Response Guide Number	127

TDG

UN number or ID number	UN1197
UN proper shipping name	Extracts, flavouring, liquid
Transport hazard class(es)	3
Packing group	II
Marine pollutant name	BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE).
Description	UN1197, Extracts, flavouring, liquid, 3, II

MEX

UN number or ID number	UN1197
UN proper shipping name	Extracts, flavouring, liquid
Transport hazard class(es)	3
Packing group	II
Description	UN1197, Extracts, flavouring, liquid, 3, II

ICAO (air)

UN number or ID number	UN1197
UN proper shipping name	Extracts, liquid
Transport hazard class(es)	3
Packing group	II
Description	UN1197, Extracts, liquid, 3, II
Special Provisions	A3

IATA

UN number or ID number	UN1197
UN proper shipping name	Extracts, liquid
Transport hazard class(es)	3
Packing group	II
ERG Code	3L
Special Provisions	A3
Description	UN1197, Extracts, liquid, 3, II
UN number or ID number	UN1197
UN proper shipping name	Extracts, liquid
Transport hazard class(es)	3
Packing group	II
EmS-No.	F-E, S-D
Marine pollutant	P
Description	UN1197, Extracts, liquid (BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE)), 3, II, (0°C c.c.), Marine pollutant

15. Regulatory information

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

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE)	64-17-5	-	Unknown *
WATER	7732-18-5	Present	Active
Trade secret	-	-	Unknown *

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL Contact supplier for inventory compliance status.
EINECS/ELINCS Contact supplier for inventory compliance status.
ENCS Contact supplier for inventory compliance status.
IECSC Contact supplier for inventory compliance status.
KECL Contact supplier for inventory compliance status.
PICCS Contact supplier for inventory compliance status.
AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.

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
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

US 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 contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	X	X	X
WATER 7732-18-5	-	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

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

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

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)
 U.S. 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 13-Feb-2024

Revision Note No information available.

Disclaimer

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 on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

North America

North America SDS version information - NGHS

UL release:
 GHS Revision 3
 2023 Q3

North America Full process, including GHS and Transportation Wizards

Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

Chemical name	California Hazardous Waste Status
BEVERAGE BASE (TRIETHYL CITRATE) (WATER SOLUBLE) 64-17-5	Toxic Ignitable