

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 21-Sep-2024

Revision Number 1

**1. Identification**

Product identifier

**Product Name** Shiso Leaf Extract, Natural (Perilla Frutescens)

Other means of identification

**Product Code(s)** SC-ITEM 288

**UN number or ID number** UN1197

**Synonyms** None

Recommended use of the chemical and restrictions on use

**Recommended use** Food and Beverage Flavoring

**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

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

Label elements



**Danger**

**Hazard statements**

Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
May cause cancer.  
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)
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER	64-17-5	50.00 - 90.00	-	-
PERILLA ALDEHYDE	2111-75-3	1.000 - 5.00	-	-

#### 4. First-aid measures

##### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	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.
<b>Skin contact</b>	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.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

<b>Symptoms</b>	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.
<b>Effects of Exposure</b>	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

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	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
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 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>

Chemical name	Alberta	British Columbia	Ontario	Quebec
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 64-17-5	TWA: 1000 ppm TWA: 1880 mg/m <sup>3</sup>	STEL: 1000 ppm	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1880 mg/m <sup>3</sup>

**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**                                    Liquid  
**Color**    Colorless to straw colored  
**Odor**    Typical of Shiso - minty and sweet.  
**Odor threshold**                                No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	23 C. 74 F.	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	0.8521 - 0.8691	None known
<b>Water solubility</b>	Soluble in water	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

**Other information**

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available
<b>Specific Gravity @ 25C</b>	0.8491 - 0.8691
<b>Specific Gravity @ 20C</b>	0.8521 - 0.8721
<b>Refractive Index @ 20C</b>	1.35790 - 1.37790

**10. Stability and reactivity**

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	Strong acids. Strong bases. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	None known based on information supplied.

**11. Toxicological information**

**Information on likely routes of exposure**

**Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	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.
<b>Ingestion</b>	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**

<b>Symptoms</b>	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.
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**Acute toxicity**

**Numerical measures of toxicity**

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

<b>ATEmix (oral)</b>	10,754.30 mg/kg
<b>ATEmix (dermal)</b>	99,999.00 mg/kg
<b>ATEmix (inhalation-gas)</b>	99,999.00 ppm

ATEmix (inhalation-vapor) 99,999.00 mg/l  
 ATEmix (inhalation-dust/mist) 110,324.00 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 64-17-5	7060 mg/kg ( Rat )	-	124.7 mg/L ( Rat ) 4 h

**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
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 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
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 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

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

Chemical name	Partition coefficient
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER 64-17-5	-0.32

**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 Description** ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER UN1197, Extracts, flavoring, liquid, 3, II, Marine pollutant (ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER)  
**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** ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER.  
**Description** UN1197, Extracts, flavouring, liquid, 3, II

**MEX**

**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

**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 (ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER), 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
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER	64-17-5	-	Unknown *
WATER	7732-18-5	Present	Active
PERILLA ALDEHYDE	2111-75-3	-	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

<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	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  
**AIC** - 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: Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage

Chemical name	California Proposition 65
ETHYL ALCOHOL 190 PROOF FOOD GRADE/KOSHER - 64-17-5	Carcinogen Developmental

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
ETHYL ALCOHOL 190 PROOF FOOD	X	X	X

GRADE/KOSHER 64-17-5			
WATER 7732-18-5	-	-	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2*	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> 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 21-Sep-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**