APEX FLAVORS, INC.

SAFETY DATA SHEET.



Version 1

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

ELER TYPE, NATURAL & ARTIFICIAL ARTIFICIAL TOP NOTE)
se_ ble. ble

Emergency telephone

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

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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 Harmful if inhaled Causes serious eye irritation May cause an allergic skin reaction May cause cancer Highly flammable liquid and vapor				
Appearance clear	Physical state liquid	Odor blackberry with cooked spicy notes		

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 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
ETHYL ALCOHOL	64-17-5	30-50%	*
GLYCERINE	56-81-5	30-50%	*
BENZYL ALCOHOL	100-51-6	1-5%	*
2-Butanone, 4-(4-hydroxyphenyl)-	5471-51-2	1-5%	*
CITRIC ACID	77-92-9	1-5%	*
BENZYL ALCOHOL	100-51-6	1-5%	*
METHYLCYCLOPENTENOLONE	80-71-7	1-5%	*
VANILLIN	121-33-5	<1	*
ACETALDEHYDE	75-07-0	<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	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash off immediately with plenty of water.	
Inhalation	Move to fresh air.	
Ingestion	Clean mouth with water and drink afterwards plenty of water.	
Self-protection of the first aider	Remove all sources of ignition.	
Most important symptoms/effects, a	acute and delayed	
Main Symptoms	Hives.	
Indication of immediate medical attention and special treatment needed, if necessary		

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.

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

No information available.

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.			
Environmental precautions				
Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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	Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal			

7. HANDLING AND STORAGE

binder, sawdust). Pick up and transfer to properly labeled containers.

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.			
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	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900
		(vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	mg/m³
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	
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
ISOAMYL ALCOHOL 123-51-3	STEL: 125 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 360 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m ³ (vacated) STEL: 125 ppm (vacated) STEL: 450 mg/m ³	IDLH: 500 ppm TWA: 100 ppm TWA: 360 mg/m ³ STEL: 125 ppm STEL: 450 mg/m ³
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
DIMETHYL SULFIDE 75-18-3	TWA: 10 ppm	-	
ACETOPHENONE 98-86-2	TWA: 10 ppm	-	
CITRAL 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	
PINENES 80-56-8	TWA: 20 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
 If splashes are likely to occur, wear:.
- Skin and body protectionChemical resistant apron.
 - **Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should 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	clear
Odor	blackberry with cooked spicy no
Color	light yellow
Duran anti-	

Property pН Melting/freezing point Boiling point/boiling range Flash Point **Evaporation rate** Flammability (solid, gas) Flammability Limits in Air Upper flammability limit lower flammability limit Vapor pressure mm Hg 20°C Vapor density Specific Gravity @ 25C 0.9896 - 1.0196 Specific Gravity @ 20C **Refractive Index** Water solubility Solubility in other solvents Partition coefficient: n-octanol/water Autoignition temperature **Decomposition temperature** Viscosity, kinematic Viscosity, dynamic No information available **Explosive properties Oxidizing Properties** Other information Softening point

Molecular Weight VOC Content(%) **Density VALUE Bulk Density VALUE** otes

Values

21 °C / 69 °F No information available No information available

No information available No information available

0.9926 - 1.0226 1.4040 - 1.4340 Practically insoluble

No information available No information available

No information available No information available

No information available No information available No information available No information available No information available

Method

No information available FCC Method FCC Method Closed cup No information available No information available No information available

No information available No information available FCC Method

FCC Method FCC Method

No information available No information available No information available No information available 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

Pr	oduct 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
GLYCERINE 56-81-5	-	10 g/kg (Rabbit)	570 mg/m³(Rat)1 h
BENZYL ALCOHOL 100-51-6	1230 mg/kg (Rat)	2000 mg/kg (Rabbit)	8.8 mg/L (Rat)4 h
CITRIC ACID 77-92-9	3000 mg/kg (Rat)	-	-
BENZYL ALCOHOL 100-51-6	1230 mg/kg (Rat)	2000 mg/kg (Rabbit)	8.8 mg/L (Rat)4 h
ACETALDEHYDE 75-07-0	1930 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 Germ Cell Mutagenicity Carcinogenicity	No information available. No information available. 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 1), 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	Х
ACETALDEHYDE 75-07-0	A3	Group 1 Group 2B	Reasonably Anticipated	Х

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity

No information available.

A3 - Animal Carcinogen

Specific target organ systemic toxicity (single exposure)	No information available.
Specific target organ systemic	No information available.
toxicity (repeated exposure) Chronic toxicity	May cause adverse liver effects. Contains a known or suspected reproductive toxin.
Target Organ Effects	Blood, Central nervous system, Eyes, Kidney, 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

1.35698% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	log Pow
ETHYL ALCOHOL	-0.32
64-17-5	
GLYCERINE	-1.76
56-81-5	
BENZYL ALCOHOL	1.1
100-51-6	
CITRIC ACID	-1.72
77-92-9	
BENZYL ALCOHOL	1.1
100-51-6	
VANILLIN	1.23
121-33-5	
ACETALDEHYDE	0.5
75-07-0	

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 U001 U004

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
ACETALDEHYDE 75-07-0	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT/ADR UN/ID No Proper shipping name Hazard class Packing Group ERG Code	1197 EXTRACTS, FLAVOURING, LIQUID 3 II 127
	1107

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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
ACETALDEHYDE - 75-07-0	75-07-0	0.24	0.1
SARA 311/312 Hazard Categories			
Acute Health Hazard	no		
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).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
ACETALDEHYDE	1000 lb			Х
75-07-0				

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.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
ACETALDEHYDE 75-07-0	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

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	
	Developmental	
ACETALDEHYDE - 75-07-0	Carcinogen	
METHYL EUGENOL - 93-15-2	Carcinogen	

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
ETHYL ALCOHOL	X	Х	X
64-17-5			
GLYCERINE	Х	Х	Х
56-81-5			
ETHYL BUTYRATE	Х	Х	Х
105-54-4			
ETHYL ACETATE	Х	Х	Х
141-78-6			
ACETALDEHYDE	Х	Х	Х
75-07-0			
METHYL EUGENOL	Х		
93-15-2			
PINENES	Х	X	Х
80-56-8			

U.S. EPA Label information

16. OTHER INFORMATION

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<u>NFPA</u> <u>HMIS</u>	Health Hazard 2 Health Hazard 2	Flammability 4 Flammability 4	Instability 0 Physical Hazard 0	Physical and chemical hazards * Personal protection b
Revision Date Revision Note	31-Oct-201 No informa	16 ition available		

WARNING/DISCLAIMER:

Revision#

Apex Flavors, Inc.'s products are sold exclusively for use in food and drink for human consumption. These products have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, and electronic cigarettes or similar devices (collectively "E-Cigarettes"). In supplying this product(s), Apex Flavors, Inc. instructs, and purchasing recipient confirms, that this product(s) will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof. Recipients of our products that use them outside of their intended use of food or drink do so at their own risk and without warranty, either expressed or implied, from Apex Flavors, Inc. or its suppliers. The user assumes all liability for loss, injury, damage, or expense resulting from such uses.

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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