



This safety data sheet complies with the requirements of:
 Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Date 09-Nov-2018

Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 196TTB
Product name CHAMPAGNE TYPE EXTRACT, NATURAL FLAVOR BLEND

Pure substance/mixture Mixture
 Contains ETHYL ALCOHOL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Ingredient for further processing

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

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

For further information, please contact:

E-mail Address cpisano@apexflavors.com

1.4. Emergency telephone number

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

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Carcinogenicity	Category 1A - (H350)
Flammable liquids	Category 3 - (H226)

2.2. Label elements

Product identifier
 Contains ETHYL ALCOHOL



Signal Word
 Danger

Hazard Statements

H350 - May cause cancer

H226 - Flammable liquid and vapor

Contains TRANS-2-HEXENAL EUH208 - May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P370 + P378 - In case of fire: Use .? to extinguish

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

2.3. Other information

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
PROPYLENE GLYCOL	200-338-0	57-55-6	50-90%	No data available	No data available
ETHYL ALCOHOL	200-578-6	64-17-5	1-5%	Flam. Liq. 2 (H225) Eye Irrit. 1 (H319)	No data available
TRANS-2-HEXENAL	229-778-1	6728-26-3	<1%	Aquatic Acute 2 (H401) (EFFA) Skin Sens. 1 (H317) (EFFA) Skin Irrit. 3 (316) (EFFA) Aquatic Chronic 2 (H411) (EFFA) Acute Tox. 4 (H302) (EFFA) Acute Tox. 3 (H311)(EFFA) Flam. Liq. 3 (H226)(EFFA)	No data available
ISOAMYL ALCOHOL	204-633-5	123-51-3	<1%	Flam. Liq. 3 (H226)(EFFA) Acute Tox. 4 (H332)(EFFA)	No data available
ACETIC ACID	200-580-7	64-19-7	<1%	Skin Corr. 1A (314) Eye Dam. 1 (H318) Flam. Liq. 3 (H226)	No data available
PROPIONIC ACID	201-176-3	79-09-4	<1%	Skin Corr. 1B (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 5 (H303)(EFFA) Flam. Liq. 3 (H226)(EFFA) Skin Corr. 1B (H314) Eye Dam. 1 (H318)	No data available
ETHYL ACETATE	Present	141-78-6	<1%	Eye Irrit. 1 (H319) (EFFA) Flam. Liq. 2 (H225) (EFFA) Eye Irrit. 1 (H319) (EUH066) Flam. Liq. 2 (H225) STOT SE 3 (H336) Eye Irrit. 2 (H319)	No data available
ISOAMYL ACETATE	Present	123-92-2	<1%	Aquatic Acute 3 (H402) (EFFA) (EUH066) Flam. Liq. 3 (H226)	No data available
FURFURAL	Present	98-01-1	<1%	Acute Tox. 3 (H301) Carc. 2 (H351) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 2 (315) (EFFA) Acute Tox. 3 (H301) (EFFA) Acute Tox. 4 (H312)(EFFA) Flam. Liq. 4 (H227)(EFFA) Acute Tox. 3 (H331)(EFFA) Carc. 2 (H351) Eye Irrit. 1 (H319) Skin Irrit. 2 (H315) Acute Tox. 3	No data available

				(H301) Acute Tox. 4 (H312) Acute Tox. 3 (H331) Acute Tox. 4 (H312) Skin Irrit. 2 (H315) STOT SE 3 (H335) Carc. 2 (H351) Acute Tox. 3 (H331) Eye Irrit. 2 (H319)	
PINENES	201-291-9	80-56-8	<1%	Aquatic Acute 1 (H400) Skin Sens. 1 (H317) Skin Irrit. 1 (H315) Asp. Tox. 1 (H304) Aquatic Chronic 1 (H410) Acute Tox. 5 (H303) Flam. Liq. 3 (H226)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

- General advice** Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance. If symptoms persist, call a physician.
- Inhalation** Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
- Skin contact** Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
- Eye contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
- Ingestion** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.
- Self-protection of the first aider** Remove all sources of ignition. Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Main Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media
No information available

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment.

For emergency responders

Use personal protection recommended in Section 8.

6.2. 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.

6.3. 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

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

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. 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. Use only in area provided with appropriate exhaust ventilation. Keep away from heat, sparks and open flame. No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

General Hygiene Considerations

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep in properly labeled containers. Keep tightly closed in a dry and cool place. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat.

Incompatible products

None known based on information supplied.

7.3 Specific end use(s)**Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
PROPYLENE GLYCOL 57-55-6	-	STEL: 450 ppm STEL: 1422 mg/m ³ STEL: 30 mg/m ³ TWA: 150 ppm TWA: 474 mg/m ³ TWA: 10 mg/m ³	-	-	-
ETHYL ALCOHOL 64-17-5	-	STEL: 3000 ppm STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: 1920 mg/m ³	VME: 1000 ppm VME: 1900 mg/m ³ VLCT: 5000 ppm VLCT: 9500 mg/m ³	VLA-ED: 1000 ppm VLA-ED: 1910 mg/m ³	-
ISOAMYL ALCOHOL 123-51-3	-	STEL: 125 ppm STEL: 458 mg/m ³ TWA: 100 ppm TWA: 366 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³	STEL: 125 ppm STEL: 458 mg/m ³ TWA: 100 ppm TWA: 366 mg/m ³	-
ACETIC ACID 64-19-7	TWA 10 ppm TWA 25 mg/m ³	-	VLCT: 10 ppm VLCT: 25 mg/m ³	VLA-EC: 15 ppm VLA-EC: 37 mg/m ³ VLA-ED: 10 ppm VLA-ED: 25 mg/m ³	-
PROPIONIC ACID 79-09-4	TWA 10 ppm TWA 31 mg/m ³ STEL 20 ppm STEL 62 mg/m ³	STEL: 15 ppm STEL: 46 mg/m ³ TWA: 10 ppm TWA: 31 mg/m ³	TWA: 10 ppm TWA: 31 mg/m ³ STEL: 20 ppm STEL: 62 mg/m ³	STEL: 20 ppm STEL: 62 mg/m ³ TWA: 10 ppm TWA: 31 mg/m ³	-
ETHYL ACETATE 141-78-6	-	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 1400 mg/m ³	TWA: 400 ppm TWA: 1460 mg/m ³	-
ISOAMYL ACETATE 123-92-2	TWA 50 ppm TWA 270 mg/m ³ STEL 100 ppm STEL 540 mg/m ³	TWA: 50 ppm TWA: 270 mg/m ³	TWA: 50 ppm TWA: 270 mg/m ³ STEL: 100 ppm STEL: 540 mg/m ³	STEL: 100 ppm STEL: 540 mg/m ³ TWA: 50 ppm TWA: 270 mg/m ³	-
FURFURAL 98-01-1	-	STEL: 5 ppm STEL: 20 mg/m ³ TWA: 2 ppm TWA: 8 mg/m ³ Skin	STEL: 2 ppm STEL: 8 mg/m ³	S* TWA: 2 ppm TWA: 8 mg/m ³	-
PINENES 80-56-8	-	-	-	VLA-ED: 20 ppm VLA-ED: 113 mg/m ³	-
Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
ETHYL ALCOHOL 64-17-5	-	TWA: 1000 ppm	Skin STEL: 1900 mg/m ³ TWA: 260 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
ISOAMYL ALCOHOL 123-51-3	-	STEL: 125 ppm TWA: 100 ppm	-	TWA: 100 ppm TWA: 370 mg/m ³ STEL: 150 ppm STEL: 550 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³
ACETIC ACID 64-19-7	-	STEL: 15 ppm TWA: 10 ppm	-	TWA: 5 ppm TWA: 13 mg/m ³ STEL: 10 ppm STEL: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³
PROPIONIC ACID 79-09-4	TWA: 10 ppm TWA: 31 mg/m ³ STEL: 20 ppm STEL: 62 mg/m ³	STEL: 20 ppm STEL: 62 mg/m ³ TWA: 10 ppm TWA: 31 mg/m ³	STEL: 62 mg/m ³ TWA: 31 mg/m ³	TWA: 10 ppm TWA: 31 mg/m ³ STEL: 20 ppm STEL: 61 mg/m ³	TWA: 10 ppm TWA: 31 mg/m ³
ETHYL ACETATE 141-78-6	-	TWA: 400 ppm	-	TWA: 300 ppm TWA: 1100 mg/m ³ STEL: 500 ppm STEL: 1800 mg/m ³	TWA: 150 ppm TWA: 540 mg/m ³

ISOAMYL ACETATE 123-92-2	TWA: 50 ppm TWA: 270 mg/m ³ STEL: 100 ppm STEL: 540 mg/m ³	STEL: 100 ppm STEL: 540 mg/m ³ TWA: 50 ppm	STEL: 530 mg/m ³	TWA: 50 ppm TWA: 270 mg/m ³ STEL: 100 ppm STEL: 540 mg/m ³	TWA: 50 ppm TWA: 271 mg/m ³
FURFURAL 98-01-1	-	TWA: 2 ppm	-	TWA: 2 ppm TWA: 8 mg/m ³ STEL: 5 ppm STEL: 20 mg/m ³ Skin	TWA: 2 ppm TWA: 7.9 mg/m ³ Skin
PINENES 80-56-8	-	TWA: 20 ppm	-	-	-
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
PROPYLENE GLYCOL 57-55-6	-	-	-	TWA: 25 ppm TWA: 79 mg/m ³ STEL: 37.5 ppm STEL: 118.5 mg/m ³	TWA: 150 ppm TWA: 470 mg/m ³ TWA: 10 mg/m ³
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m ³ MAK: 1000 ppm MAK: 1900 mg/m ³	STEL: 1000 ppm STEL: 1920 mg/m ³ MAK: 500 ppm MAK: 960 mg/m ³	NDS: 1900 mg/m ³	TWA: 500 ppm TWA: 950 mg/m ³ STEL: 625 ppm STEL: 1187.5 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
ISOAMYL ALCOHOL 123-51-3	STEL 200 ppm STEL 720 mg/m ³ TWA: 100 ppm TWA: 360 mg/m ³	STEL: 80 ppm STEL: 292 mg/m ³ TWA: 20 ppm TWA: 73 mg/m ³	STEL: 400 mg/m ³ TWA: 200 mg/m ³	TWA: 50 ppm TWA: 180 mg/m ³ STEL: 75 ppm STEL: 225 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³ STEL: 125 ppm STEL: 450 mg/m ³
ACETIC ACID 64-19-7	STEL 20 ppm STEL 50 mg/m ³ MAK: 10 ppm MAK: 25 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ MAK: 10 ppm MAK: 25 mg/m ³	NDSch: 30 mg/m ³ NDS: 15 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 37.5 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³
PROPIONIC ACID 79-09-4	STEL 20 ppm STEL 62 mg/m ³ TWA: 10 ppm TWA: 31 mg/m ³	STEL: 20 ppm STEL: 60 mg/m ³ TWA: 10 ppm TWA: 30 mg/m ³	STEL: 45 mg/m ³ TWA: 30 mg/m ³	TWA: 10 ppm TWA: 30 mg/m ³ STEL: 20 ppm STEL: 45 mg/m ³	TWA: 10 ppm TWA: 31 mg/m ³ STEL: 20 ppm STEL: 62 mg/m ³
ETHYL ACETATE 141-78-6	STEL 600 ppm STEL 2100 mg/m ³ TWA: 300 ppm TWA: 1050 mg/m ³	STEL: 800 ppm STEL: 2800 mg/m ³ TWA: 400 ppm TWA: 1400 mg/m ³	STEL: 600 mg/m ³ TWA: 200 mg/m ³	TWA: 150 ppm TWA: 550 mg/m ³ STEL: 187.5 ppm STEL: 687.5 mg/m ³	TWA: 200 ppm STEL: 400 ppm
ISOAMYL ACETATE 123-92-2	STEL 100 ppm STEL 540 mg/m ³ TWA: 50 ppm TWA: 270 mg/m ³	TWA: 50 ppm TWA: 260 mg/m ³	STEL: 500 mg/m ³ TWA: 250 mg/m ³	TWA: 50 ppm TWA: 260 mg/m ³ STEL: 75 ppm STEL: 325 mg/m ³	TWA: 50 ppm TWA: 260 mg/m ³ STEL: 100 ppm STEL: 520 mg/m ³
FURFURAL 98-01-1	Skin TWA: 5 ppm TWA: 20 mg/m ³	Skin TWA: 2 ppm TWA: 8 mg/m ³	STEL: 25 mg/m ³ TWA: 10 mg/m ³	TWA: 2 ppm TWA: 8 mg/m ³ Skin STEL: 4 ppm STEL: 16 mg/m ³	TWA: 2 ppm TWA: 8 mg/m ³ STEL: 5 ppm STEL: 20 mg/m ³ Skin
PINENES 80-56-8	-	-	-	TWA: 25 ppm TWA: 140 mg/m ³ Skin STEL: 37.5 ppm STEL: 175 mg/m ³	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Skin and body protection

Tightly fitting safety goggles.

Antistatic boots. Impervious gloves. Wear fire/ flame resistant/ retardant clothing. Long sleeved clothing. Chemical resistant apron.

Environmental Exposure Controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Appearance Odor Color	liquid clear typical of champagne colorless																																																																												
<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Property</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Values</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>• Method</u></th> </tr> </thead> <tbody> <tr> <td>pH</td> <td></td> <td>No information available</td> </tr> <tr> <td>Melting/freezing point</td> <td></td> <td>No information available</td> </tr> <tr> <td>Boiling point/boiling range</td> <td></td> <td>FCC Method</td> </tr> <tr> <td>Flash Point</td> <td>59 °C / 138 °F</td> <td>Closed cup</td> </tr> <tr> <td>Evaporation rate</td> <td></td> <td>FCC Method</td> </tr> <tr> <td>Flammability (solid, gas)</td> <td></td> <td>No information available</td> </tr> <tr> <td>Flammability Limits in Air</td> <td></td> <td></td> </tr> <tr> <td> Upper flammability limit</td> <td></td> <td>No information available</td> </tr> <tr> <td> lower flammability limit</td> <td></td> <td>No information available</td> </tr> <tr> <td>Vapor pressure mm Hg 20°C</td> <td></td> <td>No information available</td> </tr> <tr> <td>Vapor density</td> <td></td> <td>No information available</td> </tr> <tr> <td>Relative density</td> <td></td> <td>No information available</td> </tr> <tr> <td>Specific Gravity @ 25C</td> <td>1.0205 - 1.0405</td> <td>FCC Method</td> </tr> <tr> <td>Specific Gravity @ 20C</td> <td>1.0235 - 1.0435</td> <td>FCC Method</td> </tr> <tr> <td>Refractive Index</td> <td>1.384 - 1.404</td> <td>FCC Method</td> </tr> <tr> <td>Water solubility</td> <td></td> <td>No information available</td> </tr> <tr> <td>Solubility in other solvents</td> <td></td> <td>No information available</td> </tr> <tr> <td>Partition coefficient: n-octanol/water</td> <td></td> <td>No information available</td> </tr> <tr> <td>Autoignition temperature</td> <td></td> <td>No information available</td> </tr> <tr> <td>Decomposition temperature</td> <td></td> <td>No information available</td> </tr> <tr> <td>Viscosity, kinematic</td> <td></td> <td>No information available</td> </tr> <tr> <td>Viscosity, dynamic</td> <td></td> <td>No information available</td> </tr> <tr> <td>Explosive properties</td> <td>No information available</td> <td></td> </tr> <tr> <td>Oxidizing Properties</td> <td>No information available</td> <td></td> </tr> </tbody> </table>			<u>Property</u>	<u>Values</u>	<u>• Method</u>	pH		No information available	Melting/freezing point		No information available	Boiling point/boiling range		FCC Method	Flash Point	59 °C / 138 °F	Closed cup	Evaporation rate		FCC Method	Flammability (solid, gas)		No information available	Flammability Limits in Air			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	Relative density		No information available	Specific Gravity @ 25C	1.0205 - 1.0405	FCC Method	Specific Gravity @ 20C	1.0235 - 1.0435	FCC Method	Refractive Index	1.384 - 1.404	FCC Method	Water solubility		No information available	Solubility in other solvents		No information available	Partition coefficient: n-octanol/water		No information available	Autoignition temperature		No information available	Decomposition temperature		No information available	Viscosity, kinematic		No information available	Viscosity, dynamic		No information available	Explosive properties	No information available		Oxidizing Properties	No information available	
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Explosive properties	No information available																																																																												
Oxidizing Properties	No information available																																																																												

9.2. Other information

Softening point Molecular Weight VOC Content(%) Density VALUE Bulk Density VALUE	No information available No information available No information available No information available No information available
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Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	none.
Sensitivity to Static Discharge	Yes.

10.3. Possibility of hazardous reactions

Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity****Product Information**

Product does not present an acute toxicity hazard based on known or supplied 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.

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

ATEmix (oral)	18,812.00 mg/kg
ATEmix (dermal)	14,580.00 mg/kg

Unknown Acute Toxicity

- 97.589855% of the mixture consists of ingredient(s) of unknown toxicity.
- 43.898155 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 47.146415 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 97.589855 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 97.589855 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
- 94.341595 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Oral LD50

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	
ETHYL ALCOHOL	7060 mg/kg (Rat)		124.7 mg/L (Rat) 4 h
FURFURAL	125 mg/kg (Rat)	500 - 1000 mg/kg (Rabbit)	175 ppm (Rat) 6 h

Skin corrosion/irritation	No information available.
Eye damage/irritation	No information available.
Sensitization	No information available.
Germ Cell Mutagenicity	No information available.
Carcinogenicity	No information available.
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.
Target Organ Effects	Blood, Central nervous system, Eyes, Liver, Reproductive system, Respiratory system, Skin.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Harmful to aquatic life

43.76148% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
PROPYLENE GLYCOL	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	51600: 96 h Oncorhynchus mykiss mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	10000: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50 Static
ETHYL ALCOHOL	-	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
ISOAMYL ALCOHOL	493: 72 h Desmodesmus subspicatus mg/L EC50 181: 96 h Desmodesmus subspicatus mg/L EC50	700: 96 h Salmo gairdneri mg/L LC50 static	260: 48 h Daphnia magna mg/L EC50
ACETIC ACID	-	75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
PROPIONIC ACID	45.8: 72 h Desmodesmus subspicatus mg/L EC50 43: 96 h Desmodesmus subspicatus mg/L EC50	1: 96 h Pimephales promelas mg/L LC50 static 73 - 99.7: 96 h Lepomis macrochirus mg/L LC50 static 51: 96 h Oncorhynchus mykiss mg/L LC50 static	-
ETHYL ACETATE	3300: 48 h Desmodesmus subspicatus mg/L EC50	220 - 250: 96 h Pimephales promelas mg/L LC50 flow-through 484: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 352 - 500: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	560: 48 h Daphnia magna mg/L EC50 Static
FURFURAL	-	13.4 - 19.3: 96 h Pimephales promelas mg/L LC50 static 16.79 - 26.35: 96 h Pimephales promelas mg/L LC50 flow-through	29: 24 h Daphnia magna mg/L EC50
PINENES	-	0.28: 96 h Pimephales promelas mg/L LC50 static	41: 48 h Daphnia magna mg/L LC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	log Pow
ETHYL ALCOHOL	-0.32
ISOAMYL ALCOHOL	1.28
ACETIC ACID	-0.31
PROPIONIC ACID	0.33
ETHYL ACETATE	0.6
FURFURAL	0.67
PINENES	4.1

12.4. Mobility in soil**Mobility in soil**

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
FURFURAL	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

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

Contaminated packaging Empty remaining contents.

Section 14: TRANSPORT INFORMATION**IMDG / IMO**

14.1 UN/ID No 1197
 14.2 Proper shipping name EXTRACTS, FLAVOURING, LIQUID
 14.3 Hazard class 3
 14.4 Packing Group III

DOT/ADR/RID

14.1 UN/ID No 1197
 14.2 Proper shipping name EXTRACTS, FLAVOURING, LIQUID
 14.3 Hazard class 3
 14.4 Packing Group III

ICAO/IATA

14.1 UN/ID No 1197
 14.2 Proper shipping name EXTRACTS, FLAVOURING, LIQUID
 14.3 Hazard class 3
 14.4 Packing Group III
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

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

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

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

Full text of R-phrases referred to under sections 2 and 3

R10 - Flammable

Full text of H-Statements referred to under section 3

H226 - Flammable liquid and vapor

H332 - Harmful if inhaled

H402 - Harmful to aquatic life

H319 - Causes serious eye irritation

H225 - Highly flammable liquid and vapor

- H336 - May cause drowsiness or dizziness
- H318 - Causes serious eye damage
- H401 - Toxic to aquatic life
- H317 - May cause an allergic skin reaction
- H411 - Toxic to aquatic life with long lasting effects
- H302 - Harmful if swallowed
- H311 - Toxic in contact with skin
- H303 - May be harmful if swallowed
- H314 - Causes severe skin burns and eye damage
- H400 - Very toxic to aquatic life
- H315 - Causes skin irritation
- H304 - May be fatal if swallowed and enters airways
- H410 - Very toxic to aquatic life with long lasting effects
- H301 - Toxic if swallowed
- H351 - Suspected of causing cancer if inhaled
- H312 - Harmful in contact with skin
- H227 - Combustible liquid
- H331 - Toxic if inhaled
- H335 - May cause respiratory irritation
- EUH066 - Repeated exposure may cause skin dryness or cracking

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Revision Date 09-Nov-2018

Reason for revision: Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

WARNING/DISCLAIMER:

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.