



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

Revision Date 21-Mar-2019

Version 5

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

**1.1. Product identifier**

**Product Code(s)** 265TTB  
**Product name** APPLE PIE TYPE, NATURAL & ARTIFICIAL (CONTAINS <0.10% ARTIFICIAL TOP NOTE)

**Pure substance/mixture** Mixture  
Contains BENZYL ALCOHOL, 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

<b>Acute toxicity - Inhalation (Vapors)</b>	Category 4 - (H332)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Specific target organ systemic toxicity (repeated exposure)</b>	Category 1 - (H372)
<b>Flammable liquids</b>	Category 2 - (H225)

**2.2. Label elements**

**Product identifier**  
Contains BENZYL ALCOHOL, ETHYL ALCOHOL



**Signal Word**  
Danger

**Hazard Statements**

H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H372 - Causes damage to organs through prolonged or repeated exposure if inhaled  
 H225 - Highly flammable liquid and vapor  
 Contains TRANS-2-HEXENAL, CINNAMIC ALDEHYDE EUH208 - May produce an allergic reaction

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

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 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  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 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
ETHYL ALCOHOL	200-578-6	64-17-5	50-90%	Flam. Liq. 2 (H225) Eye Irrit. 1 (H319)	No data available
Trade Secret	Listed	-	20-30%	No data available	No data available
Trade Secret	Listed	-	5-10%	No data available	No data available
Trade Secret	Listed	-	5-10%	Acute Tox. 5 (H333) Acute Tox. 4 (H302)	No data available
ACETIC ACID	200-580-7	64-19-7	1-5%	Skin Corr. 1A (314) Eye Dam. 1 (H318) Flam. Liq. 3 (H226)	No data available
Trade Secret	Listed	-	<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
ACETALDEHYDE	200-836-8	75-07-0	<1%	Carc. 2 (H351) (EFFA) Eye Irrit. 1 (H319) (EFFA) Flam. Liq. 1 (H224) (EFFA) Flam. Liq. 1 (H224) STOT SE 3 (H335) Carc. 2 (H351) Eye Irrit. 2 (H319)	No data available
Trade Secret	Listed	-	<1%	Aquatic Acute 2 (H401) (EFFA) Skin Sens. 1 (H317) (EFFA) Skin Irrit. 3 (316) (EFFA) Aquatic Chronic 2 (H411) (EFFA) Acute	No data available

				Tox. 4 (H302)(EFFA) Acute Tox. 3 (H311)(EFFA) Flam. Liq. 3 (H226)(EFFA)	
Trade Secret	Listed	-	<1%	Aquatic Acute 2 (H401) (EFFA) Skin Sens. 1 (H317) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 2 (315) (EFFA) Acute Tox. 5 (H303)(EFFA) Acute Tox. 4 (H312)(EFFA)	No data available
Trade Secret	Listed	-	<1%	Aquatic Acute 3 (H402) (EFFA) (EUH066) Flam. Liq. 3 (H226)	No data available
ACETYL METHYL CARBINOL	208-174-1	513-86-0	<1%	Flam. Liq. 3 (H226)(EFFA)	No data available
BUTYRIC ACID	Present	107-92-6	<1%	Aquatic Acute 3 (H402) (EFFA) Skin Corr. 1B (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 4 (H302) (EFFA) Flam. Liq. 4 (H227)(EFFA) Skin Corr. 1B (H314)	No data available
Trade Secret	Listed	-	<1%	Flam. Liq. 3 (H226)(EFFA) Acute Tox. 4 (H332)(EFFA)	No data available
Trade Secret	Listed	-	<1%	Aquatic Acute 3 (H402) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 3 (316) (EFFA) Acute Tox. 4 (H302) (EFFA) Acute Tox. 4 (H312)(EFFA) Flam. Liq. 3 (H226)(EFFA) Acute Tox. 4 (H302)	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 (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)	No data available
Trade Secret	Listed	-	<1%	Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 3 (316) (EFFA) Flam. Liq. 3 (H226)(EFFA)	No data available
ACETYL PROPIONYL FCC (2,3 PENTANEDIONE)	209-984-8	600-14-6	<1%	No data available	No data available
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
Trade Secret	Listed	-	<1%	Aquatic Acute 2 (H401) Skin Irrit. 3 (H316) Acute Tox. 4 (H302) Acute Tox. 5 (H313) Flam. Liq. 4 (H227)	No data available
Trade Secret	Listed	-	<1%	Aquatic Acute 1 (H400) Skin Sens. 1 (H317) Skin Irrit. 1 (H315) Asp. Tox. 1 (H304)	No data available

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				Aquatic Chronic 1 (H410) Flam. Liq. 3 (H226)	
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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

Inhalation	Move to fresh air.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

### 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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

No information available

### 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

### 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**

Ensure adequate ventilation.

**For emergency responders**

Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Prevention of fire and explosion.

**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** Take up mechanically, placing in appropriate containers for disposal.

**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**

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. Use only in area provided with appropriate exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. For personal protection see section 8.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place.

**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
ETHYL ALCOHOL 64-17-5	-	STEL: 3000 ppm STEL: 5760 mg/m <sup>3</sup> TWA: 1000 ppm TWA: 1920 mg/m <sup>3</sup>	VME: 1000 ppm VME: 1900 mg/m <sup>3</sup> VLCT: 5000 ppm VLCT: 9500 mg/m <sup>3</sup>	VLA-ED: 1000 ppm VLA-ED: 1910 mg/m <sup>3</sup>	-
Trade Secret	-	STEL: 450 ppm STEL: 1422 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> TWA: 150 ppm TWA: 474 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	-	-	-
Trade Secret	-	STEL: 30 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
ACETIC ACID 64-19-7	TWA 10 ppm TWA 25 mg/m <sup>3</sup>	-	VLCT: 10 ppm VLCT: 25 mg/m <sup>3</sup>	VLA-EC: 15 ppm VLA-EC: 37 mg/m <sup>3</sup> VLA-ED: 10 ppm VLA-ED: 25 mg/m <sup>3</sup>	-
Trade Secret	TWA 10 ppm TWA 31 mg/m <sup>3</sup>	STEL: 15 ppm STEL: 46 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 62 mg/m <sup>3</sup>	-

	STEL 20 ppm STEL 62 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 62 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>	
ACETALDEHYDE 75-07-0	-	STEL: 50 ppm STEL: 92 mg/m <sup>3</sup> TWA: 20 ppm TWA: 37 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 180 mg/m <sup>3</sup>	STEL: 25 ppm STEL: 46 mg/m <sup>3</sup>	-
Trade Secret	TWA 50 ppm TWA 270 mg/m <sup>3</sup> STEL 100 ppm STEL 540 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 540 mg/m <sup>3</sup> TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	-
Trade Secret	-	STEL: 125 ppm STEL: 458 mg/m <sup>3</sup> TWA: 100 ppm TWA: 366 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>	STEL: 125 ppm STEL: 458 mg/m <sup>3</sup> TWA: 100 ppm TWA: 366 mg/m <sup>3</sup>	-
FURFURAL 98-01-1	-	STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> Skin	STEL: 2 ppm STEL: 8 mg/m <sup>3</sup>	S* TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	-
PINENES 80-56-8	-	-	-	VLA-ED: 20 ppm VLA-ED: 113 mg/m <sup>3</sup>	-
<b>Chemical Name</b>	<b>Italy</b>	<b>Portugal</b>	<b>The Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
ETHYL ALCOHOL 64-17-5	-	TWA: 1000 ppm	Skin STEL: 1900 mg/m <sup>3</sup> TWA: 260 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> STEL: 1300 ppm STEL: 2500 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
Trade Secret	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 20 mg/m <sup>3</sup>	-
Trade Secret	-	-	-	TWA: 10 ppm TWA: 45 mg/m <sup>3</sup>	-
ACETIC ACID 64-19-7	-	STEL: 15 ppm TWA: 10 ppm	-	TWA: 5 ppm TWA: 13 mg/m <sup>3</sup> STEL: 10 ppm STEL: 25 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>
Trade Secret	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup> STEL: 20 ppm STEL: 62 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 62 mg/m <sup>3</sup> TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>	STEL: 62 mg/m <sup>3</sup> TWA: 31 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup> STEL: 20 ppm STEL: 61 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>
ACETALDEHYDE 75-07-0	-	Ceiling: 25 ppm	STEL: 92 mg/m <sup>3</sup> TWA: 37 mg/m <sup>3</sup>	STEL: 25 ppm STEL: 46 mg/m <sup>3</sup>	Ceiling: 25 ppm Ceiling: 45 mg/m <sup>3</sup>
Trade Secret	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 540 mg/m <sup>3</sup> TWA: 50 ppm	STEL: 530 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 540 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 271 mg/m <sup>3</sup>
Trade Secret	-	STEL: 125 ppm TWA: 100 ppm	-	TWA: 100 ppm TWA: 370 mg/m <sup>3</sup> STEL: 150 ppm STEL: 550 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>
FURFURAL 98-01-1	-	TWA: 2 ppm	-	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> Skin	TWA: 2 ppm TWA: 7.9 mg/m <sup>3</sup> Skin
Trade Secret	-	-	-	STEL: 10 ppm STEL: 42 mg/m <sup>3</sup>	-
PINENES 80-56-8	-	TWA: 20 ppm	-	-	-
Trade Secret	-	-	-	TWA: 1 ppm TWA: 4.4 mg/m <sup>3</sup> STEL: 4 ppm STEL: 17.4 mg/m <sup>3</sup> Ceiling: 4 ppm Ceiling: 17.4 mg/m <sup>3</sup>	-
Trade Secret	-	-	-	TWA: 25 ppm TWA: 140 mg/m <sup>3</sup> STEL: 50 ppm STEL:	-

				280 mg/m <sup>3</sup>	
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m <sup>3</sup> MAK: 1000 ppm MAK: 1900 mg/m <sup>3</sup>	STEL: 1000 ppm STEL: 1920 mg/m <sup>3</sup> MAK: 500 ppm MAK: 960 mg/m <sup>3</sup>	NDS: 1900 mg/m <sup>3</sup>	TWA: 500 ppm TWA: 950 mg/m <sup>3</sup> STEL: 625 ppm STEL: 1187.5 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
Trade Secret	-	-	-	TWA: 25 ppm TWA: 79 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 118.5 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 470 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
Trade Secret	-	STEL: 100 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>
Trade Secret	-	-	NDS: 240 mg/m <sup>3</sup>	-	-
ACETIC ACID 64-19-7	STEL 20 ppm STEL 50 mg/m <sup>3</sup> MAK: 10 ppm MAK: 25 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 50 mg/m <sup>3</sup> MAK: 10 ppm MAK: 25 mg/m <sup>3</sup>	NDSch: 30 mg/m <sup>3</sup> NDS: 15 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 20 ppm STEL: 37.5 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>
Trade Secret	STEL 20 ppm STEL 62 mg/m <sup>3</sup> TWA: 10 ppm TWA: 31 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 60 mg/m <sup>3</sup> TWA: 10 ppm TWA: 30 mg/m <sup>3</sup>	STEL: 45 mg/m <sup>3</sup> TWA: 30 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup> STEL: 20 ppm STEL: 45 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 31 mg/m <sup>3</sup> STEL: 20 ppm STEL: 62 mg/m <sup>3</sup>
ACETALDEHYDE 75-07-0	STEL 50 ppm STEL 90 mg/m <sup>3</sup> TWA: 50 ppm TWA: 90 mg/m <sup>3</sup> Ceiling 50 ppm Ceiling 90 mg/m <sup>3</sup>	STEL: 50 ppm STEL: 90 mg/m <sup>3</sup> TWA: 90 mg/m <sup>3</sup> TWA: 50 ppm	: 45 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 45 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 67.5 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 45 mg/m <sup>3</sup> STEL: 25 ppm STEL: 45 mg/m <sup>3</sup>
Trade Secret	STEL 100 ppm STEL 540 mg/m <sup>3</sup> TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup>	STEL: 500 mg/m <sup>3</sup> TWA: 250 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup> STEL: 75 ppm STEL: 325 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 260 mg/m <sup>3</sup> STEL: 100 ppm STEL: 520 mg/m <sup>3</sup>
Trade Secret	STEL 200 ppm STEL 720 mg/m <sup>3</sup> TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>	STEL: 80 ppm STEL: 292 mg/m <sup>3</sup> TWA: 20 ppm TWA: 73 mg/m <sup>3</sup>	STEL: 400 mg/m <sup>3</sup> TWA: 200 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 180 mg/m <sup>3</sup> STEL: 75 ppm STEL: 225 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 125 ppm STEL: 450 mg/m <sup>3</sup>
FURFURAL 98-01-1	Skin TWA: 5 ppm TWA: 20 mg/m <sup>3</sup>	Skin TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	STEL: 25 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> Skin STEL: 4 ppm STEL: 16 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 5 ppm STEL: 20 mg/m <sup>3</sup> Skin
Trade Secret	-	-	NDSch: 80 mg/m <sup>3</sup> NDS: 40 mg/m <sup>3</sup>	-	-
PINENES 80-56-8	-	-	-	TWA: 25 ppm TWA: 140 mg/m <sup>3</sup> Skin STEL: 37.5 ppm STEL: 175 mg/m <sup>3</sup>	-
Trade Secret	-	-	NDSch: 40 mg/m <sup>3</sup> NDS: 10 mg/m <sup>3</sup>	-	-
Trade Secret	-	STEL: 40 ppm STEL: 220 mg/m <sup>3</sup> MAK: 20 ppm MAK: 110 mg/m <sup>3</sup>	-	TWA: 25 ppm TWA: 140 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 175 mg/m <sup>3</sup>	-

**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**

<b>Eye/face protection</b>	Tightly fitting safety goggles.
<b>Skin and body protection</b>	Long sleeved clothing.
<b>Respiratory protection</b>	NIOSH/MSHA approved respiratory protection is required to be worn.

**Environmental Exposure Controls** No information available.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	liquid
<b>Appearance</b>	clear
<b>Odor</b>	spice apple
<b>Color</b>	light yellow to amber

Property	Values	• Method
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		FCC Method
Flash Point	22 °C / 71 °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	0.9107 - 0.9407	FCC Method
Specific Gravity @ 20C	0.9137 - 0.9437	FCC Method
Refractive Index	1.3886 - 1.4186	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	

**9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC Content(%)</b>	No information available
<b>Density VALUE</b>	No information available
<b>Bulk Density VALUE</b>	No information available

**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**

None known.

**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)** 7,502.00 mg/kg  
**ATEmix (dermal)** 7,192.00 mg/kg  
**ATEmix (inhalation-dust/mist)** 0.68 mg/l  
**ATEmix (inhalation-vapor)** 21.00 mg/l

**Unknown Acute Toxicity**

95.55692% of the mixture consists of ingredient(s) of unknown toxicity.  
8.50942 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
51.43332 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
95.55692 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).  
90.55692 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).  
31.58552 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Oral LD50**

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
ETHYL ALCOHOL	7060 mg/kg ( Rat )		124.7 mg/L ( Rat ) 4 h
Trade Secret	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	
Trade Secret		10 g/kg ( Rabbit )	570 mg/m <sup>3</sup> ( Rat ) 1 h
ACETIC ACID	3310 mg/kg ( Rat )	1060 mg/kg ( Rabbit )	11.4 mg/L ( Rat ) 4 h
ACETALDEHYDE	1930 mg/kg ( Rat )		
Trade Secret	2200 mg/kg ( Rat )	2000 mg/kg ( Rat ) 2000 mg/kg ( Rabbit )	
FURFURAL	125 mg/kg ( Rat )	500 - 1000 mg/kg ( Rabbit )	175 ppm ( Rat ) 6 h

**Skin corrosion/irritation** No information available.

<b>Eye damage/irritation</b>	No information available.
<b>Sensitization</b>	No information available.
<b>Germ Cell Mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>Specific target organ systemic toxicity (single exposure)</b>	No information available.
<b>Specific target organ systemic toxicity (repeated exposure)</b>	No information available.
<b>Target Organ Effects</b>	Blood, Central nervous system, Eyes, Kidney, Liver, Reproductive system, Respiratory system, Skin, Teeth.
<b>Aspiration hazard</b>	No information available.

**Section 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Ecotoxicity** Toxic to aquatic life

0.27067% 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
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
Trade Secret	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
Trade Secret	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	500: 24 h Daphnia magna mg/L EC50
Trade Secret	35: 3 h Anabaena variabilis mg/L EC50	10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static	23: 48 h water flea 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
Trade Secret	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	-
ACETALDEHYDE	237 - 249: 120 h Nitzschia linearis mg/L EC50	28.0 - 34.0: 96 h Pimephales promelas mg/L LC50 flow-through 53: 96 h Lepomis macrochirus mg/L LC50 static 1.8 - 2.4: 96 h	3.64 - 6.15: 48 h Daphnia magna mg/L EC50 Static 48.3: 48 h Daphnia magna mg/L EC50

		Oncorhynchus mykiss mg/L LC50 static 39.8 - 46.8: 96 h Pimephales promelas mg/L LC50 static	
BUTYRIC ACID	46.7: 72 h Desmodesmus subspicatus mg/L EC50	200: 24 h Lepomis macrochirus mg/L LC50	61.7: 24 h Daphnia magna mg/L EC50
Trade Secret	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
Trade Secret	-	89.7 - 106: 96 h Pimephales promelas mg/L LC50 flow-through 144: 96 h Brachydanio rerio mg/L LC50 static	201: 24 h Daphnia magna mg/L EC50
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
Trade Secret	-	12-16.5: 96 h Pimephales promelas mg/L LC50 flow-through	-
PINENES	-	0.28: 96 h Pimephales promelas mg/L LC50 static	41: 48 h Daphnia magna mg/L LC50
Trade Secret	-	0.8-1.44: 96 h Lepomis macrochirus mg/L LC50 flow-through 10.6-11.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 12.69: 96 h Oncorhynchus mykiss mg/L LC50 static 6.8-8.53: 96 h Pimephales promelas mg/L LC50 flow-through 7.5: 96 h Lepomis macrochirus mg/L LC50 static	50: 24 h Daphnia magna mg/L EC50
Trade Secret	-	0.619-0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss 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
Trade Secret	-1.76
Trade Secret	1.1
ACETIC ACID	-0.31
Trade Secret	0.33
ACETALDEHYDE	0.5
Trade Secret	2.22
BUTYRIC ACID	0.79
Trade Secret	1.28
Trade Secret	2.03
FURFURAL	0.67
PINENES	4.1
Trade Secret	1.48

**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 II

**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 II

**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 II  
 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**

<b>TSCA</b>	-
<b>DSL/NDSL</b>	-
<b>EINECS/ELINCS</b>	-
<b>ENCS</b>	-
<b>IECSC</b>	-
<b>KECL</b>	-
<b>PICCS</b>	-
<b>AICS</b>	-

**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**

No information available

**Full text of H-Statements referred to under section 3**

H333 - May be harmful if inhaled  
H302 - Harmful if swallowed  
H401 - Toxic to aquatic life  
H316 - Causes mild skin irritation  
H313 - May be harmful in contact with skin  
H227 - Combustible liquid  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H303 - May be harmful if swallowed  
H312 - Harmful in contact with skin  
H402 - Harmful to aquatic life  
H226 - Flammable liquid and vapor  
H332 - Harmful if inhaled  
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  
H225 - Highly flammable liquid and vapor

H318 - Causes serious eye damage  
H411 - Toxic to aquatic life with long lasting effects  
H311 - Toxic in contact with skin  
H351 - Suspected of causing cancer if inhaled  
H224 - Extremely flammable liquid and vapor  
H335 - May cause respiratory irritation  
H314 - Causes severe skin burns and eye damage  
H301 - Toxic if swallowed  
H331 - Toxic if inhaled  
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** 21-Mar-2019

**Reason for revision:** Not applicable.

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

**WARNING/DISCLAIMER:**

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