



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1. Product identifier**

**Number** 391TTB

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

**Product name** HUCKLEBERRY TYPE, NATURAL & ARTIFICIAL  
(CONTAINS <0.10% ARTIFICIAL TOP NOTE)

**Pure substance/mixture** Mixture

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

**Recommended Use** No information available

**1.3. Details of the supplier of the safety data sheet**

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

## 2. HAZARDS IDENTIFICATION

**2.1. Classification of the substance or mixture**

Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 3

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**  
For the full text of the R-phrases mentioned in this Section, see Section 16

**2.2. Label elements**



**Signal Word**

Warning

H226 - Flammable liquid and vapor

**Precautionary Statements**

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

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

**2.3. Other information**

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Chemical Name	EC-No	CAS-No	Alternate CAS #	Weight %	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
PROPYLENE GLYCOL	200-338-0	57-55-6		30-50%	-	No data available	No data available
ETHYL ALCOHOL	Present	64-17-5		20-30%	F; R11	Eye Irrit. 1 (H319) (EFFA) Flam. Liq. 2 (H225) (EFFA) Flam. Liq. 2 (H225)	No data available
ACETALDEHYDE	200-836-8	75-07-0		<1	F+; R12 Xi; R36/37 Carc.Cat.3; R40	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

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

**4. FIRST AID MEASURES**

**4.1. Description of first aid measures**

<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.

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Inhalation Move to fresh air.

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

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

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**Note to physicians** Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

**5.1. Extinguishing media**

**Suitable Extinguishing Media**

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

**Extinguishing media which shall not be used for safety reasons**

No information available

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

**Special Hazard**

None

**5.3. Advice for firefighters**

**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

See Section 12 for additional Ecological Information

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so.

**6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

## 7. HANDLING AND STORAGE

**7.1. Precautions for safe handling**

Ensure adequate ventilation.

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

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

**7.3 Specific end use(s)**

**Exposure scenario** N/A

**Other Guidelines** N/A

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
PROPYLENE GLYCOL 57-55-6		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>			
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>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> STEL: 5000 ppm STEL: 9500 mg/m <sup>3</sup>	STEL: 1000 ppm STEL: 1910 mg/m <sup>3</sup>	TWA: 500 ppm TWA: 960 mg/m <sup>3</sup> Ceiling / Peak: 1000 ppm Ceiling / Peak: 1920 mg/m <sup>3</sup> Skin
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>	TWA: 50 ppm TWA: 91 mg/m <sup>3</sup> Ceiling / Peak: 50 ppm Ceiling / Peak: 91 mg/m <sup>3</sup> Skin

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
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>
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>

Chemical Name	Austria	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	Poland	Norway
PROPYLENE GLYCOL 57-55-6					TWA: 25 ppm TWA: 79 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 118.5 mg/m <sup>3</sup>
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m <sup>3</sup> TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>	500 ppm NGV 1000 mg/m <sup>3</sup> NGV	STEL: 1000 ppm STEL: 1920 mg/m <sup>3</sup> TWA: 500 ppm TWA: 960 mg/m <sup>3</sup>	TWA: 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>
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>	25 ppm NGV 45 mg/m <sup>3</sup> NGV	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>

Component	Ireland
PROPYLENE GLYCOL 57-55-6 ( 30-50% )	TWA: 150 ppm TWA: 470 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
ETHYL ALCOHOL 64-17-5 ( 20-30% )	STEL: 1000 ppm
ACETALDEHYDE 75-07-0 ( <1 )	TWA: 25 ppm TWA: 45 mg/m <sup>3</sup> STEL: 25 ppm STEL: 45 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**

**Eye Protection** Tightly fitting safety goggles  
**Hand Protection** Protective gloves  
**Skin and body protection** Long sleeved clothing  
**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental Exposure Controls** No information available

**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>	mixed berry	<b>Color</b>	colorless
<b>Property</b>	<b>Values</b>	<b>Method</b>	
pH		No information available	
Melting/freezing point		No information available	
Boiling point/boiling range		FCC Method	
Flash Point	32 °C / 90 °F	Closed cup	
Evaporation rate		FCC Method	
Flammability (solid, gas)		No information available	
Flammability Limits in Air		No information available	
Upper flammability limit			
lower flammability limit			
Vapor pressure mm Hg 20°C		No information available	
Vapor density		No information available	
Relative density		No information available	
Specific Gravity @ 25C	0.955 - 0.985	FCC Method	
Specific Gravity @ 20C	0.958 - 0.988	FCC Method	
Refractive Index	1.383 - 1.413	FCC Method	
Water solubility		No information available	
Partition coefficient: n-octanol/water		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, dynamic		No information available	
<b>Explosive properties</b>	No information available		
<b>Oxidizing Properties</b>	No information available		

**9.2. Other information**

**VOC Content(%)** 75.6966445412327  
**Molecular Weight** No information available

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

### 10.4. Conditions to avoid

Heat, flames and sparks

### 10.5. Incompatible materials

No materials to be especially mentioned

### 10.6. Hazardous decomposition products

None under normal use conditions

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

<b>Inhalation</b>	There is no data available for this product
<b>Eye contact</b>	There is no data available for this product
<b>Skin contact</b>	There is no data available for this product
<b>Ingestion</b>	There is no data available for this product
<b>Acute toxicity</b>	20.733456% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 1, 2005):

<b>Oral</b>	28,957.00 mg/kg
<b>Dermal</b>	28,161.00 mg/kg

<u><b>Inhalation</b></u>	
<b>Mist</b>	14.52 mg/l

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	
ETHYL ALCOHOL			124.7 mg/L ( Rat ) 4 h
ACETALDEHYDE	1930 mg/kg ( Rat )		

<b>Skin corrosion/irritation</b>	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>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 Liver Reproductive system Respiratory system Skin
<b>Aspiration hazard</b>	No information available

**12. ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

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 2: 48 h Daphnia magna mg/L EC50 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 Oncorhynchus mykiss mg/L LC50 static 39.8 - 46.8: 96 h Pimephales promelas mg/L LC50 static	3.64 - 6.15: 48 h Daphnia magna mg/L EC50 Static 48.3: 48 h Daphnia magna mg/L EC50

**12.2. Persistence and degradability**

No information available

**12.3. Bioaccumulative potential**

No information available

Chemical Name	log Pow
ETHYL ALCOHOL	-0.32
ACETALDEHYDE	0.5

**12.4. Mobility in soil**

No information available

**12.5. Results of PBT and vPvB assessment**

**12.6. Other adverse effects**

**13. DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

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

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal

**14. TRANSPORT INFORMATION**

DOT

IMDG / IMO

**Proper shipping name** FLAMMABLE LIQUID, N.O.S. (ACETALDEHYDE)  
**Hazard class** 3  
**UN/ID No** 1993  
**Packing Group** III

ICAO/IATA

**UN/ID No** 1993  
**Proper shipping name** FLAMMABLE LIQUID, N.O.S. (ACETALDEHYDE)  
**Hazard class** 3  
**Packing Group** III  
**ERG Code** 128

**15. REGULATORY INFORMATION**

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

**WGK Classification**

Chemical Name	Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes
PROPYLENE GLYCOL 57-55-6	Hazard Class 1
ETHYL ALCOHOL 64-17-5	Hazard Class 1
ACETALDEHYDE 75-07-0	Hazard Class 1

**International Inventories**

All of the components in the product are on the following Inventory lists: No information available.

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

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List



**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

## 15.2. Chemical safety assessment

## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H319 - Causes serious eye irritation H225 - Highly flammable liquid and vapor H351 - Suspected of causing cancer if inhaled H224 - Extremely flammable liquid and vapor H335 - May cause respiratory irritation

**Revision Date** 28-Jul-2015

**Revision Note** Not applicable.

**Revision#** 1.01

**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.

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