



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

**1.1. Product identifier**

**Number** 450PGFT

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

**Product name** DRAGON FRUIT TYPE, NATURAL FLAVOR BLEND  
**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 2A |
| Carcinogenicity                   | Category 1A |
| Acute aquatic toxicity            | Category 2  |
| Flammable liquids                 | Category 2  |

**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**

Danger

**Hazard Statements**

H319 - Causes serious eye irritation

H350 - May cause cancer

H401 - Toxic to aquatic life

**Precautionary Statements**

P201 - Obtain special instructions before use

P281 - Use personal protective equipment as required

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

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 |
|----------------|-----------|----------|-----------------|----------|--|--|---------------------------|
| ETHYL ALCOHOL  | 200-578-6 | 64-17-5  |                 | 50-90%   | F; R11   | Flam. Liq. 2 (H225)<br>Flam. Liq. 2 (H225)   | No data available         |
| GLYCERINE      | Present   | 56-81-5  |                 | 15-20%   | -  | No data available  | No data available         |
| ETHYL ACETATE  | Present   | 141-78-6 |                 | 5-10%    | F; R11<br>Xi; R36<br>R66<br>R67                                | Eye Irrit. 1 (H319) (EFFA)<br>Flam. Liq. 2 (H225) (EFFA)<br>Eye Irrit. 1 (H319)<br>(EUH066)<br>Flam. Liq. 2 (H225)<br>STOT SE 3 (H336)<br>Eye Irrit. 2 (H319)                        | No data available         |
| ALLYL CAPROATE | 204-642-4 | 123-68-2 |                 | <1       | -  | Aquatic Acute 2 (H401)<br>(EFFA) Eye Irrit. 1 (H319)<br>(EFFA) Skin Irrit. 2 (315)<br>(EFFA) Acute Tox. 3<br>(H301) (EFFA) Acute Tox.<br>3 (H311)(EFFA) Flam. Liq.<br>4 (H227)(EFFA) | 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.  |
| <b>Inhalation</b>   | 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

**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

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### 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

## 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   |
|---------------------------|----------------|--|--|--|---|
| ETHYL ALCOHOL<br>64-17-5  |                | STEL: 3000 ppm<br>STEL: 5760 mg/m <sup>3</sup><br>TWA: 1000 ppm TWA:<br>1920 mg/m <sup>3</sup> | VME: 1000 ppm VME:<br>1900 mg/m <sup>3</sup><br>VLCT: 5000 ppm<br>VLCT: 9500 mg/m <sup>3</sup> | VLA-ED: 1000 ppm<br>VLA-ED: 1910 mg/m <sup>3</sup> | MAK: 500 ppm MAK:<br>960 mg/m <sup>3</sup><br>Ceiling / Peak: 1000<br>ppm Ceiling / Peak:<br>1920 mg/m <sup>3</sup><br>Skin<br>TWA: 500 ppm TWA:<br>960 mg/m <sup>3</sup> |
| GLYCERINE<br>56-81-5      |                | STEL: 30 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>                          | TWA: 50 mg/m <sup>3</sup><br>Ceiling / Peak: 100<br>mg/m <sup>3</sup>   |
| ETHYL ACETATE<br>141-78-6 |                | STEL: 400 ppm<br>TWA: 200 ppm  | TWA: 400 ppm TWA:<br>1400 mg/m <sup>3</sup>  | TWA: 400 ppm TWA:<br>1460 mg/m <sup>3</sup>        | TWA: 400 ppm TWA:<br>1500 mg/m <sup>3</sup><br>Ceiling / Peak: 800<br>ppm Ceiling / Peak:<br>3000 mg/m <sup>3</sup>   |

| Chemical Name             | Italy | Portugal                  | The Netherlands  | Finland  | Denmark                                      |
|---------------------------|-------|---------------------------|--|--|--|
| ETHYL ALCOHOL<br>64-17-5  |       | TWA: 1000 ppm             | Skin<br>STEL: 1900 mg/m <sup>3</sup><br>TWA: 260 mg/m <sup>3</sup> | TWA: 1000 ppm TWA:<br>1900 mg/m <sup>3</sup><br>STEL: 1300 ppm<br>STEL: 2500 mg/m <sup>3</sup> | TWA: 1000 ppm TWA:<br>1900 mg/m <sup>3</sup> |
| GLYCERINE<br>56-81-5      |       | TWA: 10 mg/m <sup>3</sup> |  | TWA: 20 mg/m <sup>3</sup>  |  |
| ETHYL ACETATE<br>141-78-6 |       | TWA: 400 ppm              |  | TWA: 300 ppm TWA:<br>1100 mg/m <sup>3</sup><br>STEL: 500 ppm STEL:<br>1800 mg/m <sup>3</sup>   | TWA: 150 ppm TWA:<br>540 mg/m <sup>3</sup>   |

| Chemical Name             | Austria  | Sweden -<br>Occupational<br>Exposure Limits -<br>TLVs (LLVs) | Switzerland  | Poland  | Norway   |
|---------------------------|--|--|--|---|--|
| ETHYL ALCOHOL<br>64-17-5  | STEL 2000 ppm STEL<br>3800 mg/m <sup>3</sup><br>MAK: 1000 ppm MAK:<br>1900 mg/m <sup>3</sup> | 500 ppm NGV 1000<br>mg/m <sup>3</sup> NGV                    | STEL: 1000 ppm<br>STEL: 1920 mg/m <sup>3</sup><br>MAK: 500 ppm MAK:<br>960 mg/m <sup>3</sup> | NDS: 1900 mg/m <sup>3</sup>                               | TWA: 500 ppm TWA:<br>950 mg/m <sup>3</sup><br>STEL: 625 ppm STEL:<br>1187.5 mg/m <sup>3</sup>  |
| GLYCERINE<br>56-81-5      |  |  | STEL: 100 mg/m <sup>3</sup><br>TWA: 50 mg/m <sup>3</sup>                                     | TWA: 10 mg/m <sup>3</sup>                                 |  |
| ETHYL ACETATE<br>141-78-6 | STEL 600 ppm STEL<br>2100 mg/m <sup>3</sup><br>TWA: 300 ppm TWA:<br>1050 mg/m <sup>3</sup>   | 150 ppm NGV 500<br>mg/m <sup>3</sup> NGV                     | STEL: 800 ppm STEL:<br>2800 mg/m <sup>3</sup><br>TWA: 400 ppm TWA:<br>1400 mg/m <sup>3</sup> | STEL: 600 mg/m <sup>3</sup><br>TWA: 200 mg/m <sup>3</sup> | TWA: 150 ppm TWA:<br>550 mg/m <sup>3</sup><br>STEL: 187.5 ppm<br>STEL: 687.5 mg/m <sup>3</sup> |

| Component                           | Ireland                                   |
|-------------------------------------|---|
| ETHYL ALCOHOL<br>64-17-5 ( 50-90% ) | TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> |
| GLYCERINE<br>56-81-5 ( 15-20% )     | TWA: 10 mg/m <sup>3</sup>                 |
| ETHYL ACETATE<br>141-78-6 ( 5-10% ) | TWA: 200 ppm<br>STEL: 400 ppm             |

**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>                            | fruity peach             | <b>Color</b>             | Colorless to light yellow. |
| <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                            | 16 °C / 60 °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                 | 0.8723 - 0.9023          | FCC Method               |                            |
| Specific Gravity @ 20C                 | 0.8753 - 0.9053          | FCC Method               |                            |
| Refractive Index                       | 1.3685 - 1.3985          | 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(%)   | 96.7670400906354         |
| 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

**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

**Acute toxicity** 0.085% 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):

**Oral** 7,561.00 mg/kg  
**Dermal** 24,245.00 mg/kg

**Inhalation**  
**Mist** 750.70 mg/l

| Chemical Name  | Oral LD50          | Dermal LD50          | LC50 Inhalation                   |
|----------------|--------------------|----------------------|-----------------------------------|
| ETHYL ALCOHOL  | 7060 mg/kg ( Rat ) |                      | 124.7 mg/L ( Rat ) 4 h            |
| GLYCERINE      |                    | 10 g/kg ( Rabbit )   | 570 mg/m <sup>3</sup> ( Rat ) 1 h |
| ETHYL ACETATE  | 5620 mg/kg ( Rat ) | 20 mL/kg ( Rabbit )  |                                   |
| ALLYL CAPROATE | 218 mg/kg ( Rat )  | 300 mg/kg ( Rabbit ) |                                   |

**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

**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 Kidney Liver Reproductive system Respiratory system Skin

**Aspiration hazard** 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 |
|---------------|-------------------|------------------|---|
|               |                   |                  |   |

|                |  |   |   |
|----------------|--|---|---|
| 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 |
| GLYCERINE      |  | 51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static  | 500: 24 h Daphnia magna mg/L EC50   |
| 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  |
| ALLYL CAPROATE |  | 30: 96 h Carassius auratus 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   |
| GLYCERINE     | -1.76   |
| ETHYL ACETATE | 0.6     |

**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 (ETHYL ALCOHOL, ETHYL ACETATE)  
**Hazard class** 3  
**UN/ID No** 1993  
**Packing Group** II

**ICAO/IATA**

**UN/ID No** 1993  
**Proper shipping name** FLAMMABLE LIQUID, N.O.S (ETHYL ALCOHOL, ETHYL ACETATE)



|               |     |
|---------------|-----|
| Hazard class  | 3   |
| Packing Group | II  |
| ERG Code      | 127 |

## 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 |
|---------------------------|---|
| ETHYL ALCOHOL<br>64-17-5  | Hazard Class 1  |
| GLYCERINE<br>56-81-5      | Hazard Class 1  |
| ETHYL ACETATE<br>141-78-6 | Hazard Class 1  |

#### International Inventories

**All of the components in the product are on the following inventory lists:** United States of America (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), China (IECSC), Philippines (PICCS).

|               |          |
|---------------|----------|
| TSCA          | Complies |
| EINECS/ELINCS | Complies |
| DSL/NDSL      | Complies |
| PICCS         | Complies |
| ENCS          | -        |
| IECSC         | Complies |
| AICS          | Complies |
| 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

H401 - Toxic to aquatic life H319 - Causes serious eye irritation H301 - Toxic if swallowed H311 - Toxic in contact with skin H227 - Combustible liquid H225 - Highly flammable liquid and vapor H336 - May cause drowsiness or dizziness EUH066 - Repeated exposure may cause skin dryness or cracking

Revision Date 17-Jun-2016

Revision Note Not applicable.

Revision# 1

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.

**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.**