



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

### 1.1. Product identifier

**Number** 721CBD

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

**Product name** MANGO TYPE, NATURAL FLAVOR BLEND (OIL SOLUBLE)  
**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

|                                       |            |
|---------------------------------------|------------|
| Acute oral toxicity                   | Category 5 |
| Acute inhalation toxicity - dust/mist | Category 4 |
| Acute aquatic toxicity                | Category 3 |
| Chronic aquatic toxicity              | Category 3 |
| 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

**Symbol(s)**  
Not dangerous

### 2.2. Label elements

**Signal Word**

Warning

**Hazard Statements**

H303 - May be harmful if swallowed

H332 - Harmful if inhaled

H412 - Harmful to aquatic life with long lasting effects

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 |
|----------------|-----------|----------|-----------------|----------|--|--|---------------------------|
| BENZYL ALCOHOL | 202-859-9 | 100-51-6 |                 | 1-5%     | Xn; R20/22   | Acute Tox. 5 (H333)<br>Acute Tox. 4 (H302)   | No data available         |
| ACETIC ACID    | Present   | 64-19-7  |                 | 1-5%     | R10<br>C; R35  | Skin Corr. 1A (314) (EFLA)<br>Eye Dam. 1 (H318) (EFLA)<br>Flam. Liq. 3 (H226)(EFLA)<br>Skin Corr. 1A (H314) Eye Dam. 1 (H318)<br>Skin Corr. 1A (H314)<br>Flam. Liq. 3 (H226) | No data available         |
| PINENES        | 201-291-9 | 80-56-8  |                 | <1       | R10, XI; R43, N; R50/53, XN; R65;                              | Aquatic Acute 1 (H400)<br>Skin Sens. 1 (H317)<br>Skin Irrit. 3 (H316)<br>Asp. Tox. 1 (H304)<br>Aquatic Chronic 1 (H410)<br>Acute Tox. 5 (H303)<br>Flam. Liq. 3 (H226)        | No data available         |
| ACETALDEHYDE   | 200-836-8 | 75-07-0  |                 | <1       | F+; R12<br>Xi; R36/37<br>Carc.Cat.3;<br>R40                    | Carc. 2 (H351) (EFLA) Eye Irrit. 1 (H319) (EFLA) Flam. Liq. 1 (H224) (EFLA)<br>Flam. Liq. 1 (H224)<br>STOT SE 3 (H335)<br>Carc. 2 (H351)                                     | No data available         |

|  |  |  |  |  |  |                     |  |
|--|--|--|--|--|--|---------------------|--|
|  |  |  |  |  |  | Eye Irrit. 2 (H319) |  |
|--|--|--|--|--|--|---------------------|--|

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>General advice</b>                     | If symptoms persist, call a physician  |
| <b>Eye contact</b>                        | 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 |
| <b>Skin contact</b>                       | 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.              |
| <b>Ingestion</b>                          | 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.  |
| <b>Inhalation</b>                         | 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.                                    |
| <b>Self-protection of the first aider</b> | Use personal protective equipment  |

### 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 Dry chemical Carbon dioxide CO<sub>2</sub> Water spray Alcohol-resistant foam

#### 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

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

See Section 12 for additional Ecological Information

**6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**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**

Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. 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).

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

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

**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  |
|-------------------------|--|--|--|--|--|
| ACETIC ACID<br>64-19-7  | TWA 10 ppm<br>TWA 25 mg/m <sup>3</sup> |  | STEL: 10 ppm<br>STEL: 25 mg/m <sup>3</sup> | STEL: 15 ppm<br>STEL: 37 mg/m <sup>3</sup><br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>Ceiling / Peak: 20 ppm<br>Ceiling / Peak: 50 mg/m <sup>3</sup>         |
| PINENES<br>80-56-8      |  |  |  | VLA-ED: 20 ppm<br>VLA-ED: 113 mg/m <sup>3</sup>  |  |
| ACETALDEHYDE<br>75-07-0 |  | STEL: 50 ppm STEL:<br>92 mg/m <sup>3</sup><br>TWA: 20 ppm TWA:<br>37 mg/m <sup>3</sup> | TWA: 100 ppm TWA:<br>180 mg/m <sup>3</sup> | STEL: 25 ppm STEL:<br>46 mg/m <sup>3</sup>   | TWA: 50 ppm TWA:<br>91 mg/m <sup>3</sup><br>Ceiling / Peak: 50 ppm<br>Ceiling / Peak: 91 mg/m <sup>3</sup><br>Skin |

| Chemical Name              | Italy | Portugal   | The Netherlands           | Finland   | Denmark                                  |
|----------------------------|-------|--|---------------------------|---|--|
| BENZYL ALCOHOL<br>100-51-6 |       |  |                           | TWA: 10 ppm TWA:<br>45 mg/m <sup>3</sup>  |  |
| ACETIC ACID<br>64-19-7     |       | STEL: 15 ppm<br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup> | TWA: 25 mg/m <sup>3</sup> | TWA: 5 ppm<br>TWA: 13 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 25 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup> |
| PINENES<br>80-56-8         |       | TWA: 20 ppm  |                           |   |  |

|                         |  |                 |   |  |  |
|-------------------------|--|-----------------|---|--|--|
| ACETALDEHYDE<br>75-07-0 |  | Ceiling: 25 ppm | STEL: 92 mg/m <sup>3</sup><br>TWA: 37 mg/m <sup>3</sup> | STEL: 25 ppm STEL:<br>46 mg/m <sup>3</sup> | Ceiling: 25 ppm<br>Ceiling: 45 mg/m <sup>3</sup> |
|-------------------------|--|-----------------|---|--|--|

| Chemical Name              | Austria  | Sweden -<br>Occupational<br>Exposure Limits -<br>TLVs (LLVs) | Switzerland  | Poland  | Norway   |
|----------------------------|--|--|--|---|--|
| BENZYL ALCOHOL<br>100-51-6 |  |  |  | NDS: 240 mg/m <sup>3</sup>                              |  |
| ACETIC ACID<br>64-19-7     | STEL 20 ppm<br>STEL 50 mg/m <sup>3</sup><br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup>   | 5 ppm NGV<br>13 mg/m <sup>3</sup> NGV                        | STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup><br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup> | STEL: 30 mg/m <sup>3</sup><br>TWA: 15 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 37.5 mg/m <sup>3</sup>           |
| PINENES<br>80-56-8         |  | 25 ppm NGV 150<br>mg/m <sup>3</sup> NGV                      |  |   | TWA: 25 ppm TWA:<br>140 mg/m <sup>3</sup><br>Skin<br>STEL: 37.5 ppm<br>STEL: 175 mg/m <sup>3</sup> |
| ACETALDEHYDE<br>75-07-0    | STEL 50 ppm STEL<br>90 mg/m <sup>3</sup><br>TWA: 50 ppm TWA:<br>90 mg/m <sup>3</sup><br>Ceiling 50 ppm Ceiling<br>90 mg/m <sup>3</sup> | 25 ppm NGV 45<br>mg/m <sup>3</sup> NGV                       | STEL: 50 ppm STEL:<br>90 mg/m <sup>3</sup><br>TWA: 90 mg/m <sup>3</sup> TWA:<br>50 ppm | : 45 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup>      | TWA: 25 ppm TWA:<br>45 mg/m <sup>3</sup><br>STEL: 37.5 ppm<br>STEL: 67.5 mg/m <sup>3</sup>         |

| Component                       | Ireland  |
|---------------------------------|--|
| ACETIC ACID<br>64-19-7 ( 1-5% ) | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 15 ppm<br>STEL: 37 mg/m <sup>3</sup> |
| ACETALDEHYDE<br>75-07-0 ( <1 )  | TWA: 25 ppm TWA: 45 mg/m <sup>3</sup><br>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 Chemical resistant apron Antistatic boots Impervious gloves  
**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

**General Hygiene Considerations** When using, do not eat, drink or smoke Provide regular cleaning of equipment, work area and clothing

**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>                            | mango                    | <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                            | 52 °C / 126 °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                 | 0.9668 - 0.9968          | FCC Method               |           |
| Specific Gravity @ 20C                 | 0.9698 - 0.9998          | FCC Method               |           |
| Refractive Index                       | 1.4307 - 1.4607          | 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(%)   | 10.0179000380449         |
| 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> | 1.1358% 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>   | 4,008.00 mg/kg |
| <b>Dermal</b> | 6,809.00 mg/kg |

|                          |             |
|--------------------------|-------------|
| <b><u>Inhalation</u></b> |             |
| <b>Mist</b>              | 1.00 mg/l   |
| <b>Vapor</b>             | 220.00 mg/l |

|                                  |                          |
|----------------------------------|--------------------------|
| <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> | Eyes Respiratory system Skin Teeth |
|-----------------------------|------------------------------------|

|                          |                          |
|--------------------------|--------------------------|
| <b>Aspiration hazard</b> | No information available |
|--------------------------|--------------------------|

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

|                            |   |
|----------------------------|---|
| <b>Ecotoxicity effects</b> | 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 |
|----------------|---------------------------------------|--|---|
| BENZYL ALCOHOL | 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    |                                       | 79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static  | 65: 48 h Daphnia magna mg/L EC50 Static             |
| PINENES        |                                       | 0.28: 96 h Pimephales promelas   | 41: 48 h Daphnia magna mg/L LC50                    |

|              |   | 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<br>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 |
|----------------|---------|
| BENZYL ALCOHOL | 1.1     |
| ACETIC ACID    | -0.31   |
| PINENES        | 4.1     |
| 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 EXTRACTS, FLAVOURING, LIQUID  
Hazard class 3  
UN/ID No 1197  
Packing Group III

**ICAO/IATA**

UN/ID No 1197  
Proper shipping name EXTRACTS, FLAVOURING, LIQUID  
Hazard class 3  
Packing Group III  
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 |
| BENZYL ALCOHOL<br>100-51-6 | Hazard Class 1  |
| ACETIC ACID<br>64-19-7     | Hazard Class 1  |
| ACETALDEHYDE<br>75-07-0    | 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          | - |
| 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**

H302 - Harmful if swallowed H319 - Causes serious eye irritation H313 - May be harmful in contact with skin H332 - Harmful if inhaled H318 - Causes serious eye damage H226 - Flammable liquid and vapor H314 - Causes severe skin burns and eye damage H351 - Suspected of causing cancer if inhaled H224 - Extremely flammable liquid and vapor H335 - May cause respiratory irritation H400 - Very toxic to aquatic life H317 - May cause an allergic skin reaction H316 - Causes mild skin irritation H304 - May be fatal if swallowed and enters airways H410 - Very toxic to aquatic life with long lasting effects H303 - May be harmful if swallowed

Revision Date 19-Jul-2016

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

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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.**