



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

### 1.1. Product identifier

**Number** 560TTB

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

**Product name** STAR 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** Not for direct consumption

### 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 4

**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

H319 - Causes serious eye irritation

H227 - Combustible liquid

### Precautionary Statements

P403 + P235 - Store in a well-ventilated place. Keep cool

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

P280 - Wear protective gloves/ eye protection/ face protection

### 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		90-100%	-	No data available	No data available
ETHYL ACETATE	Present	141-78-6		1-5%	F; R11 Xi; R36 R66 R67	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
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.
<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
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 ACETATE 141-78-6		STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup>	TWA: 400 ppm TWA: 1460 mg/m <sup>3</sup>	TWA: 400 ppm TWA: 1500 mg/m <sup>3</sup> Ceiling / Peak: 800 ppm Ceiling / Peak: 3000 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>	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 ACETATE 141-78-6		TWA: 400 ppm		TWA: 300 ppm TWA: 1100 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1800 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 540 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 ACETATE 141-78-6	STEL 600 ppm STEL 2100 mg/m <sup>3</sup> TWA: 300 ppm TWA: 1050 mg/m <sup>3</sup>	150 ppm NGV 500 mg/m <sup>3</sup> NGV	STEL: 800 ppm STEL: 2800 mg/m <sup>3</sup> TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup>	STEL: 600 mg/m <sup>3</sup> TWA: 200 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 550 mg/m <sup>3</sup> STEL: 187.5 ppm STEL: 687.5 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 ( 90-100% )	TWA: 150 ppm TWA: 470 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
ETHYL ACETATE 141-78-6 ( 1-5% )	TWA: 200 ppm STEL: 400 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

<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory protection</b>	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>	characteristic of starfruit	<b>Color</b>	colorless

<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	93 °C / 200 °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	1.0149 - 1.0449	FCC Method
Specific Gravity @ 20C	1.0179 - 1.0479	FCC Method
Refractive Index	1.4177 - 1.4477	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

<b>VOC Content(%)</b>	99.045
<b>Molecular Weight</b>	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>	0.425% 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>	18,534.00 mg/kg
<b>Dermal</b>	21,137.00 mg/kg
<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
<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	10000: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna

		Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	mg/L EC50 Static
ETHYL ACETATE	3300: 48 h Desmodosmus 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
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 ACETATE	0.6
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/ADR** Not regulated

**IMDG / IMO** Not regulated

**ICAO/IATA** Not regulated

**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 ACETATE 141-78-6	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 H336 - May cause drowsiness or dizziness H351 - Suspected of causing cancer if inhaled H224 - Extremely flammable liquid and vapor H335 - May cause respiratory irritation EUH066 - Repeated exposure may cause skin dryness or cracking

Revision Date 09-Jan-2018

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.

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**Disclaimer**

Food ingredients that are safe to be consumed in food products may pose hazards if not handled properly. This product is intended to be used in food products and, not intended to be consumed in its present form. 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.