



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

Revision Date 20-Nov-2018

Version 1

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

### 1.1. Product identifier

**Product Code(s)** 593  
**Product name** MARSHMALLOW TOASTED TYPE, NATURAL & ARTIFICIAL

**Pure substance/mixture** Mixture

### 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>Chronic aquatic toxicity</b>	Category 3 - (H412)
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### 2.2. Label elements

**Product identifier**

**Hazard Statements**

H412 - Harmful to aquatic life with long lasting effects

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

P273 - Avoid release to the environment

### 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
PROPYLENE GLYCOL	200-338-0	57-55-6	50-90%	No data available	No data available
ETHYL MALTOL	225-582-5	4940-11-8	1-5%	Acute Tox. 4 (H302) (EFFA)	No data available
ACETIC ACID	200-580-7	64-19-7	<1%	Skin Corr. 1A (314) Eye Dam. 1 (H318) Flam. Liq. 3 (H226)	No data available
PHENOL	Present	108-95-2	<1%	Acute Tox. 3 (H301) STOT RE 2 (H373) (EFFA) Skin Corr. 1B (314) (EFFA) Muta. 2 (H341) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 3 (H301) (EFFA) Acute Tox. 3 (H311)(EFFA) Acute Tox. 3 (H331)(EFFA) Acute Tox. 3 (H311) Skin Corr. 1B (H314) STOT RE 2 (H373) Muta. 2 (H341) Acute Tox. 3 (H331)	No data available

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

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

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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**

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

### **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**

Ensure adequate ventilation.

#### **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**

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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>	-	-	-
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>	-
PHENOL 108-95-2	S* TWA 7.8 mg/m <sup>3</sup> TWA 2 ppm	STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> TWA: 2 ppm TWA: 7.8 mg/m <sup>3</sup> Skin	TWA: 2 ppm TWA: 7.8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 15.6 mg/m <sup>3</sup>	S* STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	-
Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
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>
PHENOL 108-95-2	TWA: 2 ppm TWA: 8.0 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 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>	Skin TWA: 8 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> Skin	TWA: 1 ppm TWA: 4 mg/m <sup>3</sup> Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
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>	TWA: 150 ppm TWA: 470 mg/m <sup>3</sup> TWA: 10 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>
PHENOL 108-95-2	Skin STEL 4 ppm STEL 16 mg/m <sup>3</sup> TWA: 2 ppm TWA: 8 mg/m <sup>3</sup>	Skin STEL: 5 ppm STEL: 19 mg/m <sup>3</sup> TWA: 5 ppm TWA: 19 mg/m <sup>3</sup>	STEL: 16 mg/m <sup>3</sup> TWA: 7.8 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 4 mg/m <sup>3</sup> Skin STEL: 3 ppm STEL: 12 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 8 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16 mg/m <sup>3</sup> Skin

**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/face protection** Tightly fitting safety goggles.  
**Skin and body protection** Long sleeved clothing.

**Environmental Exposure Controls** No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** liquid  
**Appearance** clear

**Odor** characteristic of toasted marshmallow  
**Color** Colorless to light yellow.

<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		
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	1.0403 - 1.0603	FCC Method
Specific Gravity @ 20C	1.0433 - 1.0633	FCC Method
Refractive Index	1.4076 - 1.4276	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

Softening point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density VALUE	No information available
Bulk Density VALUE	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.

<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.

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	11,304.00 mg/kg
<b>ATEmix (dermal)</b>	17,851.00 mg/kg

**Unknown Acute Toxicity**

- 98.855% of the mixture consists of ingredient(s) of unknown toxicity.
- 26.655 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 26.655 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 98.855 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 98.855 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
- 98.855 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Oral LD50**

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	

<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>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>Aspiration hazard</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity

Harmful to aquatic life Harmful to aquatic life with long lasting effects

26.795% 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
PROPYLENE GLYCOL	19000: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	51600: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 41 - 47: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 static 51400: 96 h <i>Pimephales promelas</i> mg/L LC50 static 710: 96 h <i>Pimephales promelas</i> mg/L LC50	10000: 24 h <i>Daphnia magna</i> mg/L EC50 1000: 48 h <i>Daphnia magna</i> mg/L EC50 Static
ACETIC ACID	-	75: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 79: 96 h <i>Pimephales promelas</i> mg/L LC50 static	47: 24 h <i>Daphnia magna</i> mg/L EC50 65: 48 h <i>Daphnia magna</i> mg/L EC50 Static
PHENOL	46.42: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.0188 - 0.1044: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 187 - 279: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 static	11.9 - 50.5: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 20.5 - 25.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 32: 96 h <i>Pimephales promelas</i> mg/L LC50 5.449 - 6.789: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 7.5 - 14: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 4.23 - 7.49: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 5.0 - 12.0: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 13.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 11.9 - 25.3: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 11.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 semi-static 34.09 - 47.64: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 31: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 27.8: 96 h <i>Brachydanio rerio</i> mg/L LC50 0.00175: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 33.9 - 43.3: 96 h <i>Oryzias latipes</i> mg/L LC50 flow-through 23.4 - 36.6: 96 h <i>Oryzias latipes</i> mg/L LC50 static	4.24 - 10.7: 48 h <i>Daphnia magna</i> mg/L EC50 Static 10.2 - 15.5: 48 h <i>Daphnia magna</i> mg/L EC50

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

Chemical Name	log Pow
ACETIC ACID	-0.31
PHENOL	1.47

### 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

### **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**

<b>14.1 UN/ID No</b>	Not regulated
<b>14.2 Proper shipping name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated

#### **DOT/ADR/RID**

<b>14.1 UN/ID No</b>	Not regulated
<b>14.2 Proper shipping name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated

#### **ICAO/IATA**

<b>14.1 UN/ID No</b>	Not regulated
<b>14.2 Proper shipping name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	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**

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

**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**

R22 - Harmful if swallowed

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

H301 - Toxic if swallowed  
 H373 - May cause damage to organs through prolonged or repeated exposure if inhaled  
 H341 - Suspected of causing genetic defects if inhaled  
 H318 - Causes serious eye damage  
 H311 - Toxic in contact with skin  
 H331 - Toxic if inhaled  
 H314 - Causes severe skin burns and eye damage  
 H302 - Harmful if swallowed  
 H226 - Flammable liquid and vapor

**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 20-Nov-2018

Reason for revision: Not applicable.

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.