



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) 593TTB
Product name MARSHMALLOW TOASTED 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 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

Chronic aquatic toxicity	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

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

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

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
PROPYLENE GLYCOL 57-55-6	-	STEL: 450 ppm STEL: 1422 mg/m ³ STEL: 30 mg/m ³ TWA: 150 ppm TWA: 474 mg/m ³ TWA: 10 mg/m ³	-	-	-
ACETIC ACID 64-19-7	TWA 10 ppm TWA 25 mg/m ³	-	VLCT: 10 ppm VLCT: 25 mg/m ³	VLA-EC: 15 ppm VLA-EC: 37 mg/m ³ VLA-ED: 10 ppm VLA-ED: 25 mg/m ³	-
PHENOL 108-95-2	S* TWA 7.8 mg/m ³ TWA 2 ppm	STEL: 4 ppm STEL: 16 mg/m ³ TWA: 2 ppm TWA: 7.8 mg/m ³ Skin	TWA: 2 ppm TWA: 7.8 mg/m ³ STEL: 4 ppm STEL: 15.6 mg/m ³	S* STEL: 4 ppm STEL: 16 mg/m ³ TWA: 2 ppm TWA: 8 mg/m ³	-
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 ³ STEL: 10 ppm STEL: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³
PHENOL 108-95-2	TWA: 2 ppm TWA: 8.0 mg/m ³ STEL: 4 ppm STEL: 16 mg/m ³ Skin	STEL: 4 ppm STEL: 16 mg/m ³ TWA: 2 ppm TWA: 8 mg/m ³	Skin TWA: 8 mg/m ³	TWA: 2 ppm TWA: 8 mg/m ³ STEL: 4 ppm STEL: 16 mg/m ³ Skin	TWA: 1 ppm TWA: 4 mg/m ³ Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
PROPYLENE GLYCOL 57-55-6	-	-	-	TWA: 25 ppm TWA: 79 mg/m ³ STEL: 37.5 ppm STEL: 118.5 mg/m ³	TWA: 150 ppm TWA: 470 mg/m ³ TWA: 10 mg/m ³
ACETIC ACID 64-19-7	STEL 20 ppm STEL 50 mg/m ³ MAK: 10 ppm MAK: 25 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ MAK: 10 ppm MAK: 25 mg/m ³	NDSch: 30 mg/m ³ NDS: 15 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 37.5 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³
PHENOL 108-95-2	Skin STEL 4 ppm STEL 16 mg/m ³ TWA: 2 ppm TWA: 8 mg/m ³	Skin STEL: 5 ppm STEL: 19 mg/m ³ TWA: 5 ppm TWA: 19 mg/m ³	STEL: 16 mg/m ³ TWA: 7.8 mg/m ³	TWA: 1 ppm TWA: 4 mg/m ³ Skin STEL: 3 ppm STEL: 12 mg/m ³	TWA: 2 ppm TWA: 8 mg/m ³ STEL: 4 ppm STEL: 16 mg/m ³ 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.

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.

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

ATEmix (oral)	11,304.00 mg/kg
ATEmix (dermal)	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)	

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.
Reproductive toxicity	No information available.
Specific target organ systemic toxicity (single exposure)	No information available.
Specific target organ systemic toxicity (repeated exposure)	No information available.
Aspiration hazard	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 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
ACETIC ACID	-	75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
PHENOL	46.42: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.0188 - 0.1044: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 187 - 279: 72 h Desmodesmus subspicatus mg/L EC50 static	11.9 - 50.5: 96 h Pimephales promelas mg/L LC50 flow-through 20.5 - 25.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Pimephales promelas mg/L LC50 5.449 - 6.789: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.5 - 14: 96 h Oncorhynchus mykiss mg/L LC50 static 4.23 - 7.49: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.0 - 12.0: 96 h Oncorhynchus mykiss mg/L LC50 13.5: 96 h Lepomis macrochirus mg/L LC50 static 11.9 - 25.3: 96 h Lepomis macrochirus mg/L LC50 flow-through 11.5: 96 h Lepomis macrochirus mg/L LC50 semi-static 34.09 - 47.64: 96 h Poecilia reticulata mg/L LC50 static 31: 96 h Poecilia reticulata mg/L LC50 semi-static 27.8: 96 h Brachydanio rerio mg/L LC50 0.00175: 96 h Cyprinus carpio mg/L LC50 semi-static 33.9 - 43.3: 96 h Oryzias latipes mg/L LC50 flow-through 23.4 - 36.6: 96 h Oryzias latipes mg/L LC50 static	4.24 - 10.7: 48 h Daphnia magna mg/L EC50 Static 10.2 - 15.5: 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
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

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

DOT/ADR/RID

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

ICAO/IATA

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