APEX FLAVORS, INC.

SAFETY DATA SHEET.



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

Revision Date 09-Jul-2019 Version 1.01

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

1.1. Product identifier

Product Code(s) 673BEV, 673BOT, 673TTB

Product name CHICORY ROOT ROASTED EXTRACT, NATURAL (CHICORIUM INFYBUS)

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

Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 1A - (H350)
Chronic aquatic toxicity	Category 3 - (H412)
Flammable liquids	Category 3 - (H226)

2.2. Label elements

Product identifier



Signal Word

Danger

Hazard Statements

H319 - Causes serious eye irritation

H350 - May cause cancer

H412 - Harmful to aquatic life with long lasting effects

H226 - Flammable liquid and vapor

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

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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

P370 + P378 - In case of fire: Use .? to extinguish

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

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
ETHYL ALCOHOL	200-578-6	64-17-5	50-90%	Flam. Liq. 2 (H225) Eye Irrit. 1 (H319)	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

General advice Immediate medical attention is required. Show this material safety data sheet to the doctor

in attendance.

Inhalation Move to fresh air.

Skin contact Wash off immediately with plenty of water.

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.

Self-protection of the first aider Remove all sources of ignition.

4.2. Most important symptoms and effects, both acute and delayed

Date 09-Jul-2019

Main Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

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

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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 Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal

binder, sawdust). Pick up and transfer to properly labeled containers.

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. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

General Hygiene Considerations

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

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
ETHYL ALCOHOL	-	STEL: 3000 ppm	VME: 1000 ppm VME:	VLA-ED: 1000 ppm	-
64-17-5		STEL: 5760 mg/m ³	1900 mg/m ³	VLA-ED: 1910 mg/m ³	
		TWA: 1000 ppm TWA: 1920 mg/m ³	VLCT: 5000 ppm VLCT: 9500 mg/m ³		
Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
ETHYL ALCOHOL	-	TWA: 1000 ppm	Skin	TWA: 1000 ppm TWA:	TWA: 1000 ppm TWA:
64-17-5			STEL: 1900 mg/m ³	1900 mg/m ³	1900 mg/m ³
			TWA: 260 mg/m ³	STEL: 1300 ppm	
				STEL: 2500 mg/m ³	
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
ETHYL ALCOHOL	STEL 2000 ppm STEL	STEL: 1000 ppm	NDS: 1900 mg/m ³	TWA: 500 ppm TWA:	TWA: 1000 ppm TWA:
64-17-5	3800 mg/m ³	STEL: 1920 mg/m ³		950 mg/m ³	1900 mg/m ³
	MAK: 1000 ppm MAK:	MAK: 500 ppm MAK:		STEL: 625 ppm STEL:	
	1900 mg/m ³	960 mg/m ³		1187.5 mg/m ³	

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration No

(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 Respiratory protection

Antistatic boots. Wear fire/ flame resistant/ retardant clothing. Impervious gloves.

NIOSH/MSHA approved respiratory protection is required to be worn.

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** slightly turbid Aroma Similar to coffee Dark brown Color

Property Method **Values**

No information available pН No information available Melting/freezing point

Boiling point/boiling range FCC Method **Flash Point** 26 °C / 78 °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 0.9100 - 0.9300 FCC Method FCC Method Specific Gravity @ 20C N/A

Refractive Index FCC Method 1.3520 - 1.3720

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

Heat, flames and sparks.

Page 5 / 9

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.

InhalationThere is no data available for this product.Eye contactThere is no data available for this product.Skin contactThere is no data available for this product.IngestionThere is no data available for this product.

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

ATEmix (oral) 6,712.00 mg/kg ATEmix (inhalation-dust/mist) 66,196.70 mg/l

Unknown Acute Toxicity

99.9976% of the mixture consists of ingredient(s) of unknown toxicity.

28.3576 % of the mixture consists of ingredient(s) of unknown acute oral toxicity. 99.9976 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

99.9976 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas). 99.9976 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor). 30.3976 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Oral LD50

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
ETHYL ALCOHOL	7060 mg/kg (Rat)		124.7 mg/L (Rat) 4 h

Skin corrosion/irritationNo 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.

Target Organ Effects Blood, Central nervous system, Eyes, Liver, Reproductive system, Respiratory system,

Skin.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

39.6% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aguatic invertebrates
			•
ETHYL ALCOHOL	-	12.0 - 16.0: 96 h Oncorhynchus	9268 - 14221: 48 h Daphnia magna
		mykiss mL/L LC50 static 100: 96 h	mg/L LC50 10800: 24 h Daphnia
		Pimephales promelas mg/L LC50	magna mg/L EC50 2: 48 h Daphnia
		static 13400 - 15100: 96 h	magna mg/L EC50 Static
		Pimephales promelas mg/L LC50	
		flow-through	

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	log Pow
ETHYL ALCOHOL	-0.32

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 1197

14.2 Proper shipping name EXTRACTS, FLAVOURING, LIQUID

14.3 Hazard class 3 14.4 Packing Group III

DOT/ADR/RID

14.1 UN/ID No 1197

14.2 Proper shipping name EXTRACTS, FLAVOURING, LIQUID

14.3 Hazard class 3 14.4 Packing Group III

ICAO/IATA

14.1 UN/ID No 1197

14.2 Proper shipping name CHICORY ROOT ROASTED EXTRACT, NATURAL

14.3 Hazard class 3 14.4 Packing Group III

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 Complies **DSL/NDSL** Complies **EINECS/ELINCS** Complies **ENCS** Complies Complies **IECSC KECL** Complies **PICCS** Complies **AICS** Complies

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

R10 - Flammable

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under section 3

H400 - Very toxic to aquatic life

H317 - May cause an allergic skin reaction

H315 - Causes skin irritation

H304 - May be fatal if swallowed and enters airways

H410 - Very toxic to aquatic life with long lasting effects

H226 - Flammable liquid and vapor

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

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 09-Jul-2019

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.