APEX FLAVORS, INC.

SAFETY DATA SHEET.

Version 1

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

1.1. Product identifier

Number 449PGFT

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

Product name OATMEAL COOKIE TYPE EXTRACT, NATURAL & ARTIFICIAL
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
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1A
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 3
Flammable liquids	Category 2

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)
F - Highly flammable
Xn - Harmful

R-code(s)
F;R11 - Xn;R21

2.2. Label elements

Signal Word
Danger

Hazard Statements
H303 - May be harmful if swallowed
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
H350 - May cause cancer
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements
P201 - Obtain special instructions before use
P281 - Use personal protective equipment as required
P308 + P313 - IF exposed or concerned: Get medical advice/ attention
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
ETHYL ALCOHOL	200-578-6	64-17-5		50-90%	F; R11	Flam. Liq. 2 (H225) Flam. Liq. 2 (H225)	No data available
ETHYL MALTOL	225-582-5	4940-11-8		1-5%	-	Acute Tox. 4 (H302) (EFFA)	No data available
BENZYL ALCOHOL	202-859-9	100-51-6		1-5%	Xn; R20/22	Acute Tox. 5 (H333) Acute Tox. 4 (H302)	No data available
PROPIONIC ACID	201-176-3	79-09-4		1-5%	C; R34	Skin Corr. 1B (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Acute Tox. 5 (H303)(EFFA) Flam. Liq. 3 (H226)(EFFA) Skin Corr. 1B (H314) Eye Dam. 1 (H318)	No data available
HEXANOL	Present	111-27-3		<1	Xn; R22	Acute Tox. 4 (H302) Aquatic Acute 3 (H402) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 3 (316)	No data available

						(EFFA) Acute Tox. 4 (H302) (EFFA) Acute Tox. 4 (H312)(EFFA) Flam. Liq. 3 (H226)(EFFA)	
CINNAMIC ALD	305-271-1	94386-48-8		<1	XI; R38, XI; R43;	Skin Sens. 1 (H317) Eye Irrit. 1 (H319) Skin Irrit. 2 (H316) Acute Tox. 5 (H303)	No data available
PINENES	201-291-9	80-56-8		<1	R10, XI; R43, N; R50/53, XN; R65;	Aquatic Acute 1 (H400) Skin Sens. 1 (H317) Skin Irrit. 3 (H316) Asp. Tox. 1 (H304) Aquatic Chronic 1 (H410) Acute Tox. 5 (H303) Flam. Liq. 3 (H226)	No data available
CAMPHENE	Present	79-92-5		<1	R11, XI; R36, N; R50/53;	Aquatic Acute 1 (H400) Eye Irrit. 1 (H319) Skin Irrit. 3 (H316) Aquatic Chronic 1 (H410) Flam. Sol 2 (H228)	No data available
LIMONENE	227-813-5	5989-27-5		<1	R10, XI; R38, XI; R43, N; R50/53;	Aquatic Acute 1 (H400) Skin Sens. 1 (H317) Skin Irrit. 2 (H316) Asp. Tox. 1 (H304) Aquatic Chronic 1 (H410) Flam. Liq. 3 (H226)	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

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

Eye contact 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

Skin contact Wash off immediately with plenty of water.

Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

Inhalation Move to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

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

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

See Section 12 for additional Ecological Information

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

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. 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.

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place. 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
ETHYL ALCOHOL 64-17-5		STEL: 3000 ppm STEL: 5760 mg/m³ TWA: 1000 ppm TWA: 1920 mg/m³	VME: 1000 ppm VME: 1900 mg/m³ VLCT: 5000 ppm VLCT: 9500 mg/m³	VLA-ED: 1000 ppm VLA-ED: 1910 mg/m³	MAK: 500 ppm MAK: 960 mg/m³ Ceiling / Peak: 1000 ppm Ceiling / Peak:

					1920 mg/m³ Skin TWA: 500 ppm TWA: 960 mg/m³
PROPIONIC ACID 79-09-4	TWA 10 ppm TWA 31 mg/m³ STEL 20 ppm STEL 62 mg/m³	STEL: 15 ppm STEL: 46 mg/m³ TWA: 10 ppm TWA: 31 mg/m³	TWA: 10 ppm TWA: 31 mg/m³ STEL: 20 ppm STEL: 62 mg/m³	STEL: 20 ppm STEL: 62 mg/m³ TWA: 10 ppm TWA: 31 mg/m³	TWA: 10 ppm TWA: 31 mg/m³ Ceiling / Peak: 20 ppm Ceiling / Peak: 62 mg/m³
HEXANOL 111-27-3					TWA: 50 ppm TWA: 210 mg/m³
PINENES 80-56-8				VLA-ED: 20 ppm VLA-ED: 113 mg/m³	
CAMPHENE 79-92-5			TWA: 1000 mg/m³ STEL: 1500 mg/m³		
LIMONENE 5989-27-5					MAK: 20 ppm MAK: 110 mg/m³ Ceiling / Peak: 40 ppm Ceiling / Peak: 220 mg/m³ TWA: 20 ppm TWA: 110 mg/m³

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
ETHYL ALCOHOL 64-17-5		TWA: 1000 ppm	Skin STEL: 1900 mg/m³ TWA: 260 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³ STEL: 1300 ppm STEL: 2500 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³
BENZYL ALCOHOL 100-51-6				TWA: 10 ppm TWA: 45 mg/m³	
PROPIONIC ACID 79-09-4	TWA: 10 ppm TWA: 31 mg/m³ STEL: 20 ppm STEL: 62 mg/m³	STEL: 20 ppm STEL: 62 mg/m³ TWA: 10 ppm TWA: 31 mg/m³	STEL: 62 mg/m³ TWA: 31 mg/m³	TWA: 10 ppm TWA: 31 mg/m³ STEL: 20 ppm STEL: 61 mg/m³	TWA: 10 ppm TWA: 31 mg/m³
PINENES 80-56-8		TWA: 20 ppm			
LIMONENE 5989-27-5				TWA: 25 ppm TWA: 140 mg/m³ STEL: 50 ppm STEL: 280 mg/m³	

Chemical Name	Austria	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	Poland	Norway
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m³ MAK: 1000 ppm MAK: 1900 mg/m³	500 ppm NGV 1000 mg/m³ NGV	STEL: 1000 ppm STEL: 1920 mg/m³ MAK: 500 ppm MAK: 960 mg/m³	NDS: 1900 mg/m³	TWA: 500 ppm TWA: 950 mg/m³ STEL: 625 ppm STEL: 1187.5 mg/m³
BENZYL ALCOHOL 100-51-6				NDS: 240 mg/m³	
PROPIONIC ACID 79-09-4	STEL 20 ppm STEL 62 mg/m³ TWA: 10 ppm TWA: 31 mg/m³	10 ppm NGV 30 mg/m³ NGV	STEL: 20 ppm STEL: 60 mg/m³ TWA: 10 ppm TWA: 30 mg/m³	STEL: 45 mg/m³ TWA: 30 mg/m³	TWA: 10 ppm TWA: 30 mg/m³ STEL: 20 ppm STEL: 45 mg/m³
PINENES 80-56-8		25 ppm NGV 150 mg/m³ NGV			TWA: 25 ppm TWA: 140 mg/m³ Skin STEL: 37.5 ppm STEL: 175 mg/m³
LIMONENE 5989-27-5			STEL: 40 ppm STEL: 220 mg/m³ MAK: 20 ppm MAK: 110 mg/m³		TWA: 25 ppm TWA: 140 mg/m³ STEL: 37.5 ppm STEL: 175 mg/m³

Component	Ireland
ETHYL ALCOHOL 64-17-5 (50-90%)	TWA: 1000 ppm TWA: 1900 mg/m³
PROPIONIC ACID 79-09-4 (1-5%)	TWA: 10 ppm TWA: 31 mg/m³ STEL: 20 ppm STEL: 62 mg/m³

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 Antistatic boots Wear fire/ flame resistant/ retardant clothing 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 Do not allow material to contaminate ground water system

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	**Appearance**	clear
Odor	typical of oatmeal cookie with spice notes	**Color**	dark amber

Property	Values	Method
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		FCC Method
Flash Point	20 °C / 68 °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	0.916 - 0.936	FCC Method
Specific Gravity @ 20C	0.919 - 0.939	FCC Method
Refractive Index		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

Explosive properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content(%)	66.82745
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

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

Acute toxicity 0.935534% 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):

Oral 4,009.00 mg/kg
Dermal 6,024.00 mg/kg

Inhalation
Mist 1.25 mg/l
Vapor 275.00 mg/l

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

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

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
ETHYL ALCOHOL		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
BENZYL ALCOHOL	35: 3 h Anabaena variabilis mg/L	10: 96 h Lepomis macrochirus mg/L	23: 48 h water flea mg/L EC50

	EC50	LC50 static 460: 96 h Pimephales promelas mg/L LC50 static	
PROPIONIC ACID	45.8: 72 h Desmodesmus subspicatus mg/L EC50 43: 96 h Desmodesmus subspicatus mg/L EC50	1: 96 h Pimephales promelas mg/L LC50 static 73 - 99.7: 96 h Lepomis macrochirus mg/L LC50 static 51: 96 h Oncorhynchus mykiss mg/L LC50 static	
HEXANOL		89.7 - 106: 96 h Pimephales promelas mg/L LC50 flow-through 144: 96 h Brachydanio rerio mg/L LC50 static	
PINENES		0.28: 96 h Pimephales promelas mg/L LC50 static	41: 48 h Daphnia magna mg/L LC50
CAMPHENE	1000: 72 h Desmodesmus subspicatus mg/L EC50	0.72: 96 h Brachydanio rerio mg/L LC50 flow-through 150: 96 h Brachydanio rerio mg/L LC50 static	22: 48 h Daphnia magna mg/L EC50
LIMONENE		0.619-0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50	

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

Chemical Name	log Pow
ETHYL ALCOHOL	-0.32
BENZYL ALCOHOL	1.1
PROPIONIC ACID	0.33
HEXANOL	2.03
PINENES	4.1

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

Other Information According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used

14. TRANSPORT INFORMATION

DOT/ADR

UN/ID No 1993

Proper shipping name	FLAMMABLE LIQUID, N.O.S. (ETHANOL AND BUTANEDIONE)
Hazard class	3
Packing Group	II
ERG Code	128

IMDG / IMO

Proper shipping name	FLAMMABLE LIQUID, N.O.S. (ETHANOL AND BUTANEDIONE)
Hazard class	3
UN/ID No	1993
Packing Group	II

ICAO/IATA

UN/ID No	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (ETHANOL AND BUTANEDIONE)
Hazard class	3
Packing Group	II
ERG Code	128

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
ETHYL ALCOHOL 64-17-5	Hazard Class 1
BENZYL ALCOHOL 100-51-6	Hazard Class 1
PROPIONIC ACID 79-09-4	Hazard Class 1
HEXANOL 111-27-3	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

Risk Combination Phrases
R20/22 - Harmful by inhalation and if swallowed

Full text of H-Statements referred to under sections 2 and 3
H333 - May be harmful if inhaled H302 - Harmful if swallowed H402 - Harmful to aquatic life H319 - Causes serious eye irritation H312 - Harmful in contact with skin H226 - Flammable liquid and vapor 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 H225 - Highly flammable liquid and vapor H318 - Causes serious eye damage H303 - May be harmful if swallowed H314 - Causes severe skin burns and eye damage H228 - Flammable solid

Revision Date	02-Nov-2016
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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