APEX FLAVORS, INC.

SAFETY DATA SHEET.



Version 1

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

1.1. Product identifier

Number 382, 382BEV, 382TTB, 382ICR, 382COF

Manufacturer Apex Flavors, Inc. 1361 Brass Mill Rd.

Suite E

Belcamp, MD 21017 (410) 565-6600

Product name CARAMEL TYPE, NATURAL FLAVOR BLEND

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/ Outside US Chemtel 813-248-0585

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2A
Acute aquatic toxicity	Not classified for acute
Flammable liquids	Category 3

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

2.2. Label elements

Signal Word Warning

Hazard Statements

H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

H226 - Flammable liquid and vapor

Precautionary Statements

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 %	Classificatio n according to Directive 67/548/EEC or 1999/45/EC	0.00000	REACH Registration Number
PROPYLENE GLYCOL	200-338-0	57-55-6		30-50%	-	No data available	No data available
ETHYL ALCOHOL	Present	64-17-5		20-30%	F; R11	Eye Irrit. 1 (H319) (EFFA) Flam. Liq. 2 (H225) (EFFA) Flam. Liq. 2 (H225)	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

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Inhalation 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

Prevent further leakage or spillage if safe to do so.

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/m³ STEL: 30 mg/m³ TWA: 150 ppm TWA: 474 mg/m³ TWA: 10 mg/m³			
ETHYL ALCOHOL 64-17-5		STEL: 3000 ppm STEL: 5760 mg/m³ TWA: 1000 ppm TWA: 1920 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³ STEL: 5000 ppm STEL: 9500 mg/m³	STEL: 1000 ppm STEL: 1910 mg/m³	TWA: 500 ppm TWA: 960 mg/m³ Ceiling / Peak: 1000 ppm Ceiling / Peak: 1920 mg/m³ Skin

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/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m³

Chemical Name	Austria	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	Poland	Norway
PROPYLENE GLYCOL 57-55-6					TWA: 25 ppm TWA: 79 mg/m³ STEL: 37.5 ppm STEL: 118.5 mg/m³
ETHYL ALCOHOL 64-17-5	STEL 2000 ppm STEL 3800 mg/m ³ TWA: 1000 ppm TWA: 1900 mg/m ³	500 ppm NGV 1000 mg/m³ NGV	STEL: 1000 ppm STEL: 1920 mg/m³ TWA: 500 ppm TWA: 960 mg/m³	TWA: 1900 mg/m ³	TWA: 500 ppm TWA: 950 mg/m³ STEL: 625 ppm STEL: 1187.5 mg/m³

Component	Ireland
PROPYLENE GLYCOL 57-55-6 (30-50%)	TWA: 150 ppm TWA: 470 mg/m³ TWA: 10 mg/m³
ETHYL ALCOHOL 64-17-5 (20-30%)	STEL: 1000 ppm

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration No information available

(PNEC)

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection
Hand Protection
Skin and body protection
Tightly fitting safety goggles
Protective gloves
Long sleeved clothing

Respiratory protection 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

Physical state liquid Appearance clear

Odor butterscotch-like with maple and coffee notes Color Slightly 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 33 °C / 92 °F Closed cup Evaporation rate FCC Method

Flammability (solid, gas)

Flammability Limits in Air

No information available
No information available

Upper flammability limit lower flammability limit

Vapor pressure mm Hg 20°CNo information availableVapor densityNo information available

Relative density
Specific Gravity @ 25C

0.9595 - 0.9895

No information available
FCC Method

 Specific Gravity @ 20C
 0.9625 - 0.9925
 FCC Method

 Refractive Index
 1.3803 - 1.4103
 FCC Method

Water solubility

1.3803 - 1.4103

FCC Method

No information available

Partition coefficient: n-octanol/waterNo information availableAutoignition temperatureNo information availableDecomposition temperatureNo information availableViscosity, dynamicNo information available

Explosive properties No information available Oxidizing Properties No information available

9.2. Other information

VOC Content(%) 65.3989999294281 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 28.425% 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):

 Oral
 18,035.00 mg/kg

 Dermal
 41,154.00 mg/kg

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	
ETHYL ALCOHOL			124.7 mg/L (Rat) 4 h

Skin corrosion/irritationNo information availableEye damage/irritationNo information availableSensitizationNo information available

SensitizationNo information availableGerm Cell MutagenicityNo information availableCarcinogenicityNo information available

Specific target organ systemic toxicity (single exposure)

No information available

Specific target organ systemic toxicity (repeated exposure)

Target Organ Effects

No information available

Aspiration hazard No information available

12. ECOLOGICAL INFORMATION

Blood Central nervous system Eyes Liver Reproductive system Respiratory system Skin

12.1. Toxicity

Ecotoxicity effectsContains 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 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

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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 2: 48 h Daphnia magna
	Pimephales promelas mg/L LC50	mg/L EC50 Static
	static 13400 - 15100: 96 h	
	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

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

IMDG / IMO

Proper shipping name EXTRACTS, FLAVOURING, LIQUID

Hazard class 3 UN/ID No 1197 Packing Group III

ICAO/IATA

UN/ID No 1197

Proper shipping name EXTRACTS, FLAVOURING, LIQUID

Hazard class 3
Packing Group III
ERG Code 127

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 ALCOHOL 64-17-5	Hazard Class 1

International Inventories

All of the components in the product are on the following Inventory lists: United States of America (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), China (IECSC), Japan (ENCS), Philippines (PICCS).

TSCA Complies
EINECS/ELINCS Complies
DSL/NDSL Complies
PICCS Complies
ENCS Complies
IECSC Complies
AICS Complies
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

Revision Date 06-Jan-2016

Revision Note Not applicable.

Revision# 1

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

WARNING/DISCLAIMER:

Our ingredients have not been tested, nor have they been determined safe, for inhalation or use in any electronic smoking devices, electronic nicotine delivery systems, electronic cigarettes, or other similar devices (collectively "E-Cigarettes") or in any E-Liquids used with E-Cigarettes. By receiving Apex Flavors, Inc ingredients, the recipient confirms that they will not use these ingredients in connection with the manufacture and distribution of E-Cigarettes, E-Liquids or any component thereof. WE DISCLAIM, TO THE FULLEST EXTENT PERMITTED BY LAW, ALL WARRANTIES, EXPRESS OR IMPLIED, and disclaim all liability in connection with the use of our ingredients in connection with E-Cigarettes and E-Liquids. All such risks are assumed by you and the user.

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