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 21-Mar-2019 Version 5

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

1.1. Product identifier

Product Code(s) 269TTB

Product name SNICKERDOODLE TYPE, NATURAL & ARTIFICIAL

(CONTAINS < 0.10 ARTIFICIAL TOP NOTE)

Pure substance/mixture

Contains ETHYL ALCOHOL

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

| REGULATION (EC) NO 1272/2000 | |
|---|---------------------|
| Acute toxicity - Inhalation (Vapors) | Category 4 - (H332) |
| Serious eye damage/eye irritation | Category 2 - (H319) |
| Specific target organ systemic toxicity (repeated exposure) | Category 1 - (H372) |
| Flammable liquids | Category 3 - (H226) |

2.2. Label elements

Product identifier

Contains ETHYL ALCOHOL



Signal Word Danger

Hazard Statements

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

H226 - Flammable liquid and vapor

Contains CINNAMIC ALDEHYDE, ACETYL PROPIONYL FCC (2,3 PENTANEDIONE) EUH208 - May produce an allergic reaction

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

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

P314 - Get medical advice/attention if you feel unwell

P501 - Dispose of contents/container to industrial incineration plant

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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 ALCOHOL | 200-578-6 | 64-17-5 | 30-50% | Flam. Liq. 2 (H225) Eye Irrit. 1 (H319) | No data available |
| Trade Secret | Listed | - | <1% | Aquatic Acute 2 (H401) (EFFA) Skin Sens. 1 (H317) (EFFA) Eye Irrit. 1 (H319) (EFFA) Skin Irrit. 2 (315) (EFFA) Acute Tox. 5 (H303)(EFFA) Acute Tox. 4 (H312)(EFFA) | No data available |
| Trade Secret | Listed | - | <1% | Aquatic Acute 2 (H401) Skin Irrit. 3 (H316) Acute Tox. 4 (H302) Acute Tox. 5 (H313) Flam. Liq. 4 (H227) | No data available |
| Trade Secret | Listed | - | <1% | Skin Sens. 1 (H317) (EFFA) Acute Tox. 5 (H303)(EFFA) Aquatic Acute 2 (H401)(EFFA) | No data available |
| ACETYL PROPIONYL FCC (2,3 PENTANEDIONE) | 209-984-8 | 600-14-6 | <1% | No data available | 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 contactWash 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

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

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. Handle under inert gas. Protect from moisture. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. For personal protection see section 8.

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 | - | STEL: 450 ppm STEL: | | - | - |
| 57-55-6 | | 1422 mg/m ³ STEL: 30 | | | |
| | | mg/m³ | | | |
| | | TWA: 150 ppm TWA: | | | |
| | | 474 mg/m³ TWA: 10 | | | |
| ETINA ALCOLIO | | mg/m³ | \/ME_4000 \/ME | \// A ED 4000 | |
| ETHYL ALCOHOL | - | STEL: 3000 ppm | VME: 1000 ppm VME: | | - |
| 64-17-5 | | STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: | 1900 mg/m ³ VLCT: 5000 ppm | VLA-ED: 1910 mg/m ³ | |
| | | 1920 mg/m ³ | VLCT: 9500 ppin VLCT: 9500 mg/m ³ | | |
| Chemical Name | Italy | Portugal | The Netherlands | Finland | Denmark |
| | пату | TWA: 1000 ppm | Skin | | |
| ETHYL ALCOHOL 64-17-5 | - | I IVVA. 1000 ppili | STEL: 1900 mg/m ³ | TWA: 1000 ppm TWA: 1900 mg/m ³ | TWA: 1000 ppm TWA: 1900 mg/m ³ |
| 04-17-5 | | | TWA: 260 mg/m ³ | STEL: 1300 ppm | 1900 mg/m² |
| | | | 1 WA. 200 mg/m | STEL: 2500 mg/m ³ | |
| Trade Secret | - | - | - | TWA: 1 ppm TWA: 4.4 | - |
| | | | | mg/m³ | |
| | | | | STEL: 4 ppm STEL: | |
| | | | | 17.4 mg/m³ | |
| | | | | Ceiling: 4 ppm Ceiling: | |
| | | | | 17.4 mg/m ³ | |
| Chemical Name | Austria | Switzerland | Poland | Norway | Ireland |
| PROPYLENE GLYCOL | - | - | - | TWA: 25 ppm TWA: | TWA: 150 ppm TWA: |
| 57-55-6 | | | | 79 mg/m ³ | 470 mg/m³ TWA: 10 |

| | | | | STEL: 37.5 ppm | mg/m³ |
|---------------|------------------------|------------------------------|-----------------------------|-------------------------------|------------------------|
| | | | | STEL: 118.5 mg/m ³ | |
| 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 | |
| Trade Secret | - | = | NDSCh: 40 mg/m ³ | = | - |
| | | | NDS: 10 mg/m ³ | | |

Derived No Effect Level (DNEL)No information available.

Predicted No Effect Concentration No info

No information available.

(PNEC)

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

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

Respiratory protection 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 liquid

Odor Vanilla Cinnamon Color light yellow

<u>Property</u> <u>Values</u> <u>• Method</u>

pH No information available
Melting/freezing point No information available

Melting/freezing point

No information available

Boiling point/boiling range

FCC Method

Flash Point 28 °C / 82 °F Closed cup
Evaporation rate FCC Method

Flammability (solid, gas)

No information available

Flammability Limits in Air

Upper flammability limit
Iower flammability limit
Vapor pressure mm Hg 20°C
Vapor density

No information available
No information available
No information available
No information available

Vapor density

Relative density

No information available

No information available

 Specific Gravity @ 25C
 0.9298 - 0.9598
 FCC Method

 Specific Gravity @ 20C
 0.9328 - 0.9628
 FCC Method

 Refractive Index
 1.3885 - 1.4185
 FCC Method

Refractive Index 1.3885 - 1.4185 FCC Method
Water solubility No information available
Solubility in other solvents No information available

Partition coefficient: n-octanol/water

Autoignition temperature

Decomposition temperature

Viscosity, kinematic

Viscosity, dynamic

No information available
No information available
No information available
No information available

Explosive properties No information available Oxidizing Properties No information available

9.2. Other information

Softening point
Molecular Weight
VOC Content(%)
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.

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)
 11,595.00 mg/kg

 ATEmix (dermal)
 19,240.00 mg/kg

 ATEmix (inhalation-dust/mist)
 70,479.40 mg/l

Unknown Acute Toxicity

97.4773% of the mixture consists of ingredient(s) of unknown toxicity.

6.3013 % of the mixture consists of ingredient(s) of unknown acute oral toxicity. 45.27202 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

97.4773 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas). 97.4773 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor). 58.50658 % 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 |
| Trade Secret | 2200 mg/kg (Rat) | 2000 mg/kg (Rat) 2000 mg/kg (Rabbit) | |

Skin corrosion/irritation No information available.

Eye damage/irritation No information available.

No information available. Sensitization

Germ Cell Mutagenicity No information available.

No information available. Carcinogenicity

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.

No information available. **Aspiration hazard**

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Toxic to aquatic life

6.5813% 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 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 |
| 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 |
| Trade Secret | - | 0.8-1.44: 96 h Lepomis macrochirus mg/L LC50 flow-through 10.6-11.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 12.69: 96 h | 50: 24 h Daphnia magna mg/L EC50 |

| static 6.8-8.53: 96 h Pimephales promelas mg/L LC50 flow-through 7.5: 96 h Lepomis macrochirus mg/L LC50 static |
|---|
|---|

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

| Chemical Name | log Pow |
|---------------|---------|
| ETHYL ALCOHOL | -0.32 |
| Trade Secret | 2.22 |
| Trade Secret | 1.48 |

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 EXTRACTS, FLAVOURING, LIQUID

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

IECSC Complies

KECL -

PICCS Complies 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

No information available

Full text of H-Statements referred to under section 3

H401 - Toxic to aquatic life

H316 - Causes mild skin irritation

H302 - Harmful if swallowed

H313 - May be harmful in contact with skin

H227 - Combustible liquid

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H303 - May be harmful if swallowed

H312 - Harmful in contact with skin

H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

H318 - Causes serious eye damage

H225 - Highly flammable liquid and vapor

H402 - Harmful to aquatic life

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 21-Mar-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.
