



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

1.1. Product identifier

Number 194ICR

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

Product name CINNAMON ROLL OR BUN 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 inhalation toxicity - dust/mist | Category 4 |
| Serious eye damage/eye irritation | Category 2A |
| Skin sensitization | Category 1 |
| Acute aquatic toxicity | Not classified for acute |
| 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

2.2. Label elements



Signal Word

Warning

Hazard Statements

H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P280 - Wear eye protection/ face protection
 P321 - Specific treatment (see .? on this label)
 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 | Present | 64-17-5 | | 50-90% | F; R11 | Eye Irrit. 1 (H319) (EFFA) Flam. Liq. 2 (H225) (EFFA) Flam. Liq. 2 (H225) | No data available |
| BENZYL ALCOHOL | Present | 100-51-6 | | 1-5% | Xn; R20/22 | Acute Tox. 4 (H302) Eye Irrit. 1 (H319) (EFFA) Acute Tox. 4 (H302) (EFFA) Acute Tox. 5 (H313)(EFFA) Acute Tox. 4 (H332)(EFFA) Eye Irrit. 1 (H319) Acute Tox. 4 (H302) Acute Tox. 5 (H313) Acute Tox. 4 (H332) Acute Tox. 4 (H332) | No data available |

| | | | | | | | |
|-------------------|-----------|----------|--|------|---------------------|--|-------------------|
| CINNAMIC ALDEHYDE | 203-213-9 | 104-55-2 | | 1-5% | Xn; R21, Xi; R38-43 | 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 |
| COUMARIN | 202-086-7 | 91-64-5 | | <1 | XN; R22, Xi; R43; | STOT RE 2 (H373) Aquatic Acute 3 (H402) Skin Sens. 1 (H317) Acute Tox. 4 (H302) | 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 |
|--------------------------|----------------|--|--|--|--|
| ETHYL ALCOHOL 64-17-5 | | STEL: 3000 ppm STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: 1920 mg/m ³ | TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³ | STEL: 1000 ppm STEL: 1910 mg/m ³ | TWA: 500 ppm TWA: 960 mg/m ³ Ceiling / Peak: 1000 ppm Ceiling / Peak: 1920 mg/m ³ Skin |

| Chemical Name | Italy | Portugal | The Netherlands | Finland | Denmark |
|----------------------------|-------|---------------|--|--|--|
| ETHYL ALCOHOL 64-17-5 | | TWA: 1000 ppm | Skin STEL: 1900 mg/m ³ TWA: 260 mg/m ³ | TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³ | TWA: 1000 ppm TWA: 1900 mg/m ³ |
| BENZYL ALCOHOL 100-51-6 | | | | TWA: 10 ppm TWA: 45 mg/m ³ | |

| Chemical Name | Austria | Sweden - Occupational Exposure Limits - TLVs (LLVs) | Switzerland | Poland | Norway |
|----------------------------|--|---|--|-----------------------------|---|
| 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/m ³ NGV | STEL: 1000 ppm STEL: 1920 mg/m ³ TWA: 500 ppm TWA: 960 mg/m ³ | TWA: 1900 mg/m ³ | TWA: 500 ppm TWA: 950 mg/m ³ STEL: 625 ppm STEL: 1187.5 mg/m ³ |
| BENZYL ALCOHOL 100-51-6 | | | | TWA: 240 mg/m ³ | |

| Component | Ireland |
|-------------------------------------|----------------|
| ETHYL ALCOHOL 64-17-5 (50-90%) | STEL: 1000 ppm |

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 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 | Cinnamon | Color | amber |

| <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 | 17 °C / 63 °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 | 0.8211 - 0.8511 | FCC Method |
| Specific Gravity @ 20C | 0.8241 - 0.8541 | FCC Method |
| Refractive Index | 1.3663 - 1.3963 | 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(%) 91.4417644441128
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 1.4267% 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 21,195.00 mg/kg
Dermal 30,776.00 mg/kg

Mist 1.25 mg/l
Vapor 275.00 mg/l

| Chemical Name | Oral LD50 | Dermal LD50 | LC50 Inhalation |
|-------------------|--------------------|--|------------------------|
| ETHYL ALCOHOL | | | 124.7 mg/L (Rat) 4 h |
| BENZYL ALCOHOL | 1230 mg/kg (Rat) | 2 g/kg (Rabbit) | 8.8 mg/L (Rat) 4 h |
| CINNAMIC ALDEHYDE | 2200 mg/kg (Rat) | 2000 mg/kg (Rat) 2000 mg/kg (Rabbit) | |
| COUMARIN | 293 mg/kg (Rat) | | |

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 2: 48 h Daphnia magna mg/L EC50 Static |
| BENZYL ALCOHOL | 35: 3 h Anabaena variabilis mg/L EC50 | 460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 static | 23: 48 h water flea mg/L EC50 |

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 |
| CINNAMIC ALDEHYDE | 2.22 |

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 II

ICAO/IATA

UN/ID No 1197
Proper shipping name EXTRACTS, FLAVOURING, LIQUID
Hazard class 3
Packing Group II
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 |
| ETHYL ALCOHOL 64-17-5 | Hazard Class 1 |
| BENZYL ALCOHOL 100-51-6 | 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

H302 - Harmful if swallowed H319 - Causes serious eye irritation H313 - May be harmful in contact with skin H332 - Harmful if inhaled H401 - Toxic to aquatic life H317 - May cause an allergic skin reaction H303 - May be harmful if swallowed H312 - Harmful in contact with skin H225 - Highly flammable liquid and vapor H373 - May cause damage to organs (a,b,c) through prolonged or repeated exposure if inhaled H402 - Harmful to aquatic life

| | |
|----------------------|-----------------|
| Revision Date | 19-Oct-2015 |
| 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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