

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** 343135
Product Name: Apple (Tart Granny Smith) Flavor
Trade Name: Apple (Tart Granny Smith) Flavor
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- 1.3 Details of the Supplier of the Safety Data Sheet:**

Company Name:	Perfumer's Apprentice 170 Technology Circle Scotts Valley, CA 95066	Phone Number: (831)316-7137
Web site address:	Perfumersapprentice.com	
Information:	Contract #: MIS6760377	

- 1.4 Emergency telephone number:**
- | | | |
|---------------------------|----------------|-----------------------------------|
| Emergency Contact: | Chem-Tel Phone | (800)255-3924
01 (813)248-0585 |
|---------------------------|----------------|-----------------------------------|

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
Skin Corrosion/Irritation, Category 3
Flammable Liquids, Category 3
Skin Sensitization, Category 1
- 2.1.2 Classification according to Directive 1999/45/EC:**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



GHS Signal Word: Warning

GHS Hazard Phrases:

Flammable liquid and vapor.
Causes mild skin irritation.
May cause an allergic skin reaction.

GHS Precaution Phrases:

Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/{.../} equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing {dust/fume/gas/mist/vapors/spray}.
Contaminated work clothing should not be allowed out of the workplace.
Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
Specific treatment {see ... on this label}.
If skin irritation occurs, get medical advice/attention.

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If skin irritation or rash occurs, seek medical advice/attention.
Take off contaminated clothing and wash it before reuse.

GHS Storage and Disposal Phrases:

Store in cool/well-ventilated place.
Dispose of contents/container to {...}.

2.2.2 Labeling according to Directive 1999/45/EC:

2.3 Adverse Human Health Effects and Symptoms:

- 2.3.1 Inhalation:** Low hazard for normal industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation.
- 2.3.2 Skin Contact:** May be absorbed through damaged or abraded skin in harmful amounts.
- 2.3.3 Eye Contact:** May cause eye irritation.
- 2.3.4 Ingestion:** May be harmful if swallowed.

Section 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	Risk Phrases/ GHS Classification
57-55-6	Propylene glycol	39.0 -49.0 %	200-338-0 NA	No phrases apply. Skin Corr. 2: H315 Eye Damage 2A: H319 STOT (SE) 3: H335 H336
64-17-5	Ethyl alcohol	17.0 -23.0 %	200-578-6 603-002-00-5	F; R11 Flam. Liq. 2: H225
8007-80-5	Oils, cassia	< 1.0 %	NA NA	No phrases apply. Acute Tox.(D) 4: H312 Skin Corr. 2: H315 Skin Sens. 1: H317
8008-45-5	Oil, nutmeg	< 0.5 %	NA NA	No phrases apply. Flam. Liq. 3: H226 Asp. Toxic. 1: H304 Skin Sens. 1: H317 Carcinogen 1B: H350 Aquatic (A) 1: H400 Aquatic (C) 1: H410
68916-89-2	Oils, lemon, psoralen-free	< 0.5 %	614-790-5 NA	No phrases apply. Asp. Toxic. 1: H304 Skin Corr. 2: H315 Skin Sens. 1: H317 Aquatic (C) 2: H411
513-86-0	Acetyl methyl carbinol	1.0 -3.0 %	208-174-1 NA	R10 No data available.
77-92-9	Citric acid	1.0 -3.0 %	201-069-1 NA	Xi; R36/37/38 No data available.
7732-18-5	Water	1.0 -3.0 %	231-791-2 NA	No phrases apply. No data available.
123-92-2	Iso-Amyl acetate	< 6.0 %	204-662-3 607-130-00-2	R10-66 Flam. Liq. 3: H226 EUH066
659-70-1	3 - Methylbutyl isovalerate	0.5 -1.5 %	211-536-1 NA	No phrases apply. Aquatic (C) 2: H411
66-25-1	Hexanal	0.5 -1.5 %	200-624-5 NA	Xi; R10-36/37/38 No data available.
110-19-0	Iso-Butyl acetate	< 2.0 %	203-745-1 607-026-00-7	F; R11-66 Flam. Liq. 2: H225

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142-92-7	Hexyl acetate	1.0 -5.0 %	205-572-7 NA	R10 No data available.
141-78-6	Acetic acid, ethyl ester	0.5 -1.5 %	205-500-4 607-022-00-5	F; Xi; R11-36-66-67 Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H335 H336
7452-79-1	Ethyl 2 - methylbutyrate	1.0 -5.0 %	231-225-4 NA	R10 No data available.
75-07-0	Acetaldehyde	0.01 -4.0 %	200-836-8 605-003-00-6	F+; Xn; Ca:3, R12-36/37-40 Flam. Liq. 1: H224 Eye Damage 2A: H319 STOT (SE) 3: H335 Carcinogen 2: H351

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

- In Case of Inhalation:** If inhaled, remove to fresh air.
- In Case of Skin Contact:** In case of contact, flush skin with plenty of water.
- In Case of Eye Contact:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes.
- In Case of Ingestion:** Clean mouth with water and drink afterwards plenty of water.

4.2 Important Symptoms and Effects, Both Acute and Delayed:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Note for the Doctor: Treat symptomatically.

Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
- 5.2 Flammable Properties and Hazards:** No data available.
- Flash Pt:** No data available.
- Explosive Limits:** LEL: No data. UEL: No data.
- Autoignition Pt:** No data.
- 5.3 Fire Fighting Instructions:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6. Accidental Release Measures

- 6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Ensure adequate ventilation.
- 6.2 Environmental Precautions:** Prevent entry into waterways, sewers, basements or confined areas.
- 6.3 Methods and Material For Containment and Cleaning Up:** Dike to collect large liquid spills.

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Wash thoroughly after handling.
- 7.2 Precautions To Be Taken in Storing:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS #	Chemical Name	Britain EH40	France VL	Germany MAK/TRK
57-55-6	Propylene glycol	TWA: 474 mg/m3 (150 ppm) (Total Particulates) TWA: 10 mg/m3 (Powder)	No data.	No data.
64-17-5	Ethyl alcohol	TWA: 1920 mg/m3 (1000 ppm) STEL: ()	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)	No data.
8007-80-5	Oils, cassia	No data.	No data.	No data.
8008-45-5	Oil, nutmeg	No data.	No data.	No data.
68916-89-2	Oils, lemon, psoralen-free	No data.	No data.	No data.
513-86-0	Acetyl methyl carbinol	No data.	No data.	No data.
77-92-9	Citric acid	No data.	No data.	No data.
7732-18-5	Water	No data.	No data.	No data.
123-92-2	Iso-Amyl acetate	TWA: 270 mg/m3 (50 ppm) STEL: 541 mg/m3 (100 ppm)	TWA: 270 mg/m3 (50 ppm) STEL: 540 mg/m3 (100 ppm)	No data.
659-70-1	3 - Methylbutyl isovalerate	No data.	No data.	No data.
66-25-1	Hexanal	No data.	No data.	No data.
110-19-0	Iso-Butyl acetate	TWA: 724 mg/m3 (150 ppm) STEL: 903 mg/m3 (187 ppm)	TWA: 710 mg/m3 (150 ppm) STEL: 940 mg/m3 (200 ppm)	No data.
142-92-7	Hexyl acetate	No data.	No data.	No data.
141-78-6	Acetic acid, ethyl ester	TWA: (200 ppm) STEL: (400 ppm)	TWA: 1400 mg/m3 (400 ppm)	No data.
7452-79-1	Ethyl 2 - methylbutyrate	No data.	No data.	No data.
75-07-0	Acetaldehyde	TWA: 37 mg/m3 (20 ppm) STEL: 92 mg/m3 (50 ppm)	TWA: 180 mg/m3 (100 ppm)	No data.
CAS #	Chemical Name	OSHA TWA	ACGIH TWA	Europe
57-55-6	Propylene glycol	No data.	No data.	No data.
64-17-5	Ethyl alcohol	PEL: 1000 ppm	TLV: 1000 ppm	No data.
8007-80-5	Oils, cassia	No data.	No data.	No data.
8008-45-5	Oil, nutmeg	No data.	No data.	No data.
68916-89-2	Oils, lemon, psoralen-free	No data.	No data.	No data.
513-86-0	Acetyl methyl carbinol	No data.	No data.	No data.
77-92-9	Citric acid	No data.	No data.	No data.
7732-18-5	Water	No data.	No data.	No data.
123-92-2	Iso-Amyl acetate	PEL: 100 ppm	TLV: 50 ppm STEL: 100 ppm	TWA: 270 mg/m3 STEL: 540 mg/m3
659-70-1	3 - Methylbutyl isovalerate	No data.	No data.	No data.

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66-25-1	Hexanal	No data.	No data.	No data.
110-19-0	Iso-Butyl acetate	PEL: 150 ppm	TLV: 150 ppm	No data.
142-92-7	Hexyl acetate	No data.	No data.	No data.
141-78-6	Acetic acid, ethyl ester	PEL: 400 ppm	TLV: 400 ppm	No data.
7452-79-1	Ethyl 2 - methylbutyrate	No data.	No data.	No data.
75-07-0	Acetaldehyde	PEL: 200 ppm	CEIL: 25 ppm	No data.

8.2 Exposure Controls:

8.2.1 Engineering Controls (Ventilation etc.): Showers
Eyewash stations
Ventilation systems

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: No data available.

Other Protective Clothing: Wear suitable protective clothing.

Respiratory Equipment (Specify Type): If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Work/Hygienic/Maintenance Practices: Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: Slightly Cloudy Yellow
Apple Pie taste and aroma

pH: No data.

Melting Point: No data.

Boiling Point: No data.

Flash Pt: 24.40 C

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: No data. UEL: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): 0.96 at 25.0 C

Solubility in Water: No data.

Octanol/Water Partition Coefficient: No data.

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Autoignition Pt: No data.
Decomposition Temperature: No data.
Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

- 10.1 Reactivity:** No data available.
- 10.2 Stability:** Unstable [] Stable [X]
- 10.3 Conditions To Avoid - Hazardous Reactions:** No data available.
- Possibility of Hazardous Reactions:** Will occur [] Will not occur [X]
- 10.4 Conditions To Avoid - Instability:** Excess heat, moist air.
- 10.5 Incompatibility - Materials To Avoid:** Strong bases, Strong oxidizing agents.
- 10.6 Hazardous Decomposition or Byproducts:** Carbon monoxide, Carbon dioxide, Aldehydes.

Section 11. Toxicological Information

- 11.1 Information on Toxicological Effects:** This mixture has not been subjected to toxicological testing but has been blended from materials with established toxicological bibliographies. In view of the difficulty of using current standard toxicological evaluation techniques to predict potential hazards to susceptible individuals or arising from unforeseeable potentiation, this preparation should be considered and handled as if it displayed health hazards and consequently treated with all possible precaution.
- CAS# 64-17-5:
Reproductive Effects:, TClO, Inhalation, Rat, 20000. PPM, 7 H, female 1-22 day(s) after conception.
Result:
Specific Developmental Abnormalities: Other developmental abnormalities.
- Teratology, The International Journal of Abnormal Development, Alan R. Liss, Inc., 41 E. 11th St., New York, NY 10003, Vol/p/yr: 29(2),48A, 1984
- Acute toxicity, LC50, Inhalation, Rat, 20000. PPM, 10 H.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Specific Developmental Abnormalities: Central nervous system.
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,44, 1974
- Acute toxicity, LD50, Oral, Species: Rabbit, 6300. MG/KG.
Result:
Maternal Effects: Parturition.
Effects on Newborn: Growth statistics (e.g., reduced weight gain).
Effects on Newborn: Behavioral.
- Handbook of Toxicology," 4 vols., Philadelphia, W.B. Saunders Co., 1956-59
Volume(issue)/page/year: 1,254,195, W.B. Saunders Co., Philadelphia, PA, Vol/p/yr: 1,130, 1955
- CAS# 123-92-2:
Acute toxicity, LCLO, Inhalation, Species: Cat, 35.00 GM/M3.

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Behavioral: General anesthetic.

Behavioral: Food intake (animal).

Kidney, Ureter, Bladder:Proteinuria.

- Archiv fuer Gewerbepathologie und Gewerbehygiene., For publisher information, see IAEHDW, Berlin Germany, Vol/p/yr: 5,1, 1933

CAS# 110-19-0:

Acute toxicity, LD50, Oral, Rat, 13400. MG/KG.

Result:

Behavioral: Tremor.

Behavioral: Muscle weakness.

Gastrointestinal: Changes in structure or function of salivary glands.

- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,8, 1974

CAS# 141-78-6:

Acute toxicity, LC50, Inhalation, Rat, 200.0 GM/M3.

Result:

Behavioral: Somnolence (general depressed activity).

Lungs, Thorax, or Respiration:Acute pulmonary edema.

Gastrointestinal: Changes in structure or function of salivary glands.

- Science Reports of the Research Institutes, Tohoku University, Series C: Medicine., Tohoku University, Research Institute for Tuberculosis and Cancer, 4-1 Seiryomachi, Sendai Japan, Vol/p/yr: 36(1-4),10, 1989

CAS# 75-07-0:

Acute toxicity, TCLo, Inhalation, Human, 134.0 PPM, 30 M.

Result:

Lungs, Thorax, or Respiration:Other changes.

- Journal of the American Medical Association, American Medical Association, 535 N. Dearborn St., Chicago, IL 60610, Vol/p/yr: 165,1908, 1957

Sensitization: No data available.

No data available.

No data available.

Chronic Toxicological Effects: Prolonged or repeated ingestion may cause damage to kidneys, liver, lungs, digestive tract.**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

Section 12. Ecological Information

- 12.1 Toxicity:** This mixture as a whole has not been subjected to ecotoxicological testing. In view of the difficulty of using current standard ecotoxicological evaluation techniques to predict the impact of particular modes of release on vulnerable or localized parts of the ecosystem, this preparation should be considered and handled as if it displayed potential environmental hazards, and treated in consequence with all possible precaution.
- 12.2 Persistence and Degradability:** No data available.
- 12.3 Bioaccumulative Potential:** No data available.

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- 12.4 Mobility in Soil:** No data available.
- 12.5 Results of PBT and vPvB assessment:** No data available.
- 12.6 Other adverse effects:** No data available.

Section 13. Disposal Considerations

- 13.1 Waste Disposal Method:** This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Section 14. Transport Information

GHS Classification: Skin Corrosion/Irritation, Category 3 - Warning! Causes mild skin irritation
Flammable Liquids, Category 3 - Warning! Flammable liquid and vapor
Skin Sensitization, Category 1 - Warning! May cause an allergic skin reaction

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Extracts , Flavoring, Liquid.
UN Number: 1197 **Packing Group:** III
Hazard Class: 3 - FLAMMABLE LIQUID

14.2 MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Extracts , Flavoring, Liquid.

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Extracts , Flavoring, Liquid.

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
57-55-6	Propylene glycol	No	No	No
64-17-5	Ethyl alcohol	No	No	No
8007-80-5	Oils, cassia	No	No	No
8008-45-5	Oil, nutmeg	No	No	No
68916-89-2	Oils, lemon, psoralen-free	No	No	No
513-86-0	Acetyl methyl carbinol	No	No	No
77-92-9	Citric acid	No	No	No
7732-18-5	Water	No	No	No
123-92-2	Iso-Amyl acetate	No	Yes 5000 LB	No
659-70-1	3 - Methylbutyl isovalerate	No	No	No
66-25-1	Hexanal	No	No	No
110-19-0	Iso-Butyl acetate	No	Yes 5000 LB	No
142-92-7	Hexyl acetate	No	No	No
141-78-6	Acetic acid, ethyl ester	No	Yes 5000 LB	No
7452-79-1	Ethyl 2 - methylbutyrate	No	No	No
75-07-0	Acetaldehyde	No	Yes 1000 LB	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard

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311/312 as indicated: Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists	International Regulatory...
57-55-6	Propylene glycol		REACH: (R), (P)
64-17-5	Ethyl alcohol		REACH: (R), (P)
8007-80-5	Oils, cassia		REACH: (P)
8008-45-5	Oil, nutmeg		REACH: (R), (P)
68916-89-2	Oils, lemon, psoralen-free		REACH: (P)
513-86-0	Acetyl methyl carbinol		REACH: (P)
77-92-9	Citric acid		REACH: (R), (P)
7732-18-5	Water		REACH: (P)
123-92-2	Iso-Amyl acetate		REACH: (R), (P)
659-70-1	3 - Methylbutyl isovalerate		REACH: (P)
66-25-1	Hexanal		REACH: (R), (P)
110-19-0	Iso-Butyl acetate		REACH: (R), (P)
142-92-7	Hexyl acetate		REACH: (R), (P)
141-78-6	Acetic acid, ethyl ester		REACH: (R), (P)
7452-79-1	Ethyl 2 - methylbutyrate		REACH: (R), (P)
75-07-0	Acetaldehyde	CA PROP.65	REACH: (R), (P)

European Community Hazard Symbol codes:

European Community Risk and Safety Phrases:

No data available.

Section 16. Other Information

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Additional Information About This Product: This product contains no added diacetyl as an ingredient. However, because diacetyl can occur in small amounts as an artifact of the production process in other ingredients, "No Added Diacetyl" products may not be "Diacetyl Free", as trace amounts may be present.

Company Policy or Disclaimer: The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any other process, unless specified in the text.

