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

1.1 Product Code: 00239
Product Name: Red Oak Flavor
Trade Name: Red Oak 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

Web site address: Perfumersapprentice.com

Emergency telephone number:
Emergency Contact: Chem-Tel Phone (800)255-3924

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:
2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:
Respiratory 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: Danger

GHS Hazard Phrases:
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS Precaution Phrases:
P261: Avoid breathing {dust/fume/gas/mist/vapors/spray}.
P285: In case of inadequate ventilation wear respiratory protection.

GHS Response Phrases:
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+311: If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.

GHS Storage and Disposal Phrases:
P501: 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: No known effect based on information supplied
2.3.2 Skin Contact: No known effect based on information supplied
2.3.3 Eye Contact: May cause slight irritation
2.3.4 Ingestion: No known effect based on information supplied
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)/REACH Registration No.</th>
<th>Concentration</th>
<th>EC No./EC Index No.</th>
<th>Risk Phrases/GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-55-6</td>
<td>Propylene glycol</td>
<td>&gt;=10.0 %</td>
<td>200-338-0 NA</td>
<td>Skin Corr. 2: H315 Eye Damage 2A: H319 STOT (SE) 3: H335 H336</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

In Case of Inhalation: Move to fresh air.
In Case of Skin Contact: Wash skin with soap and water.
In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
In Case of Ingestion: Clean mouth with water and drink afterwards plenty of water.
Note for the Doctor: Treat symptomatically.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Flammable Properties and Hazards:
Flash Pt: 200.00 F (93.3 C)
Explosive Limits: LEL: UEL:
Autoignition Pt:

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures


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: Handle in accordance with good industrial hygiene and safety practice.

7.2 Precautions To Be Taken in Storing: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.
Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-55-6</td>
<td>Propylene glycol</td>
<td>TWA: 474 mg/m³ (150 ppm) (Total Particulates)</td>
<td>TWA: 10 mg/m³ (Powder)</td>
<td></td>
</tr>
</tbody>
</table>

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 with side-shields.
Protective Gloves: Wear suitable protective clothing.
Other Protective Clothing: Ventilation systems

Respiratory Equipment: 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: Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States:  [ ] Gas   [ X ] Liquid   [ ] Solid
Appearance and Odor: Sweet, Vanilla, Caramel
Brown, Dark Brown

Melting Point:  
Boiling Point:  200.00 F (93.3 C)
Flash Pt:  
Evaporation Rate:  
Explosive Limits:  LEL:  
UEL:  
Vapor Pressure (vs. Air or mm Hg):  
Vapor Density (vs. Air = 1):  
Specific Gravity (Water = 1):  1.038  at  22.0 C
Solubility in Water:  
Autoignition Pt:  

Section 10. Stability and Reactivity

10.1 Reactivity:

10.2 Stability: Unstable [ ] Stable [ X ]

10.3 Conditions To Avoid - Hazardous Reactions:

Possibility of Hazardous Reactions:

Will occur [ ] Will not occur [ X ]

10.4 Conditions To Avoid - Instability:

Stable under recommended storage conditions.

10.5 Incompatibility - Materials To Avoid:

None known based on information supplied.

10.6 Hazardous Decomposition Or Byproducts:

None known based on information supplied.

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.

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:

12.3 Bioaccumulative Potential:

12.4 Mobility in Soil:

12.5 Results of PBT and vPvB assessment:

12.6 Other adverse effects:
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: Respiratory Sensitization, Category 1 - Danger! May cause allergy or asthma symptoms or breathing difficulties if inhaled

14.1 LAND TRANSPORT (US DOT):
   DOT Proper Shipping Name: Not Regulated.
   DOT Hazard Class:
   UN/NA Number:

14.1 LAND TRANSPORT (Canadian TDG):
   TDG Shipping Name: Not Regulated.
   UN Number:
   Hazard Class:

14.1 LAND TRANSPORT (European ADR/RID):
   ADR/RID Shipping Name: Not Regulated.
   UN Number:
   Hazard Class:

14.2 MARINE TRANSPORT (IMDG/IMO):
   IMDG/IMO Shipping Name: Not Regulated.

14.3 AIR TRANSPORT (ICAO/IATA):
   ICAO/IATA Shipping Name: Not Regulated.

Section 15. Regulatory Information

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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-55-6</td>
<td>Propylene glycol</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections as indicated:

- [ ] Yes [X] No Acute (immediate) Health Hazard
- [X] Yes [ ] No Chronic (delayed) Health Hazard
- [X] Yes [X] No Fire Hazard
- [ ] Yes [X] No Sudden Release of Pressure Hazard
- [ ] Yes [X] No Reactive Hazard

ICAO/IATA International Regulatory: REACH: (R), (P)
Red Oak Flavor

SAFETY DATA SHEET

European Community Hazard Symbol codes:

European Community Risk and Safety Phrases:

Section 16. Other Information

Revision Date: 06/17/2014

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.