1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Asafoetida Essential Oil
Botanical name : Ferula asafoetida
INCI name : Ferula asafoetida oil
CAS #: 9000-04-8
Country of Origin : India
EINECS #: 232-522-1
Product use : Domestic and Industrial
Supplier : New Directions Aromatics Inc.
Address : 6781 Columbus Road, Mississauga, Ontario, CANADA L5T 2G9
Fax : 905-362-1926
Telephone number : 905-362-1915
Emergency phone number : (613)-996-6666 CANUTEC 24 HOUR EMERGENCY

2. HAZARDS IDENTIFICATION

Emergency Overview

GHS Classification
Acute Toxicity, Oral - Category 4
Skin corrosion/irritation - Category 2
Skin Sensitization - Category 1
Serious eye damage/eye irritation - Category 2A
Hazardous to the aquatic environment, acute hazard - Category 3
Hazardous to the aquatic environment, acute hazard - Category 3

GHS Label elements, including precautionary statements

Signal: Warning

Hazard statement(s)
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long-lasting effects.
Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P312 Call a POISON CENTER/doctor/if you feel unwell.
P321 Specific treatment (see section 4 on this label).
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists get medical advice/attention.
P362 Take off contaminated clothing.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use appropriate fire extinguisher to extinguish.
P403+P235 Store in a well ventilated place. Keep cool.
P501 Dispose of contents/container according to local regulations.

Other Info

3. COMPOSITION / INFORMATION INGREDIENTS

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS NO</th>
<th>EC NO</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl-Disulphide</td>
<td></td>
<td></td>
<td>5 - 15%</td>
</tr>
<tr>
<td>Cis-Propenyl Sec-Butyl Disulfide</td>
<td></td>
<td></td>
<td>15% - 25%</td>
</tr>
<tr>
<td>Trans-Propenyl Sec-Butyl Disulfide</td>
<td></td>
<td></td>
<td>10 - 20%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye contact

Immediately flush eyes with plenty of cool water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact
Remove contaminated clothing. Wash area with soap and water. If irritation occurs, get medical attention.

Inhalation
If inhaled, removed to fresh air. Get medical attention if symptoms appear.

Ingestion
Seek medical attention or contact local poison control center.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media
Carbon Dioxide, dry chemical or foam. Closed containers may build up pressure at elevated temperature

Unsuitable extinguishing media
Water spray, water jet.

Special protective equipment and precautions for fire-fighters
Wear proper protective equipment. Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Special hazards arising from the substance or its combustible products
None identified.

Resulting gases
Carbon Monoxide, Carbon Dioxide.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures.
Equip clean crew with proper protection. Respiratory protection equipment may be necessary.

Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and materials for containment and cleaning up
Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers.

7. HANDLING AND STORAGE

Precautions for safe handling
Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

Conditions for safe storage, including any incompatibilities
Provide local exhaust or general room ventilation to minimize dust and/or vapour concentrations. Keep container closed when not in use.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Eyes
Use tightly sealed goggles.

Skin
If skin contact or contamination of clothing is likely, protective clothing should be worn. Use protective gloves.

Respiratory
In case of insufficient ventilation, wear suitable respiratory equipment.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pale yellow to dark yellow liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Very strong garlic–onion odor.</td>
</tr>
<tr>
<td>Flash point</td>
<td>65.5 °C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in alcohol and oils. Insoluble in water.</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.510 to 1.535 @ 25°C</td>
</tr>
<tr>
<td>Optical rotation</td>
<td>+15° to +40°</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
This material presents no significant reactivity hazard.

Chemical stability
Chemically stable.

Possibility of hazardous reactions

Conditions to avoid
Avoid sparks, flame and other heat sources.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Carbon Oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not available.

Carcinogenicity
None of the components of this material are listed as a carcinogen.

Chronic toxicity
May cause allergic reactions on skin.

Reproductive toxicity
No adverse effects on reproduction are known.

Inhalation
Inhalation of high concentrations of vapor may result in irritation of eyes, nose and throat, headache, nausea, and dizziness.

Skin contact
Adverse skin effects should be prevented by normal care and personal hygiene.

Eye contact
Possible irritation should be prevented by wearing safety glasses.

Ingestion
Low order toxicity causing irritation of the stomach and intestines which results in nausea and vomiting

Repeated exposure
Repeated or prolonged contact may cause redness, irritation and scaling of skin (Dermatitis).
12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic organisms, may cause long-term adverse effects environment. Avoid any pollution of ground, surface or underground water.

13. DISPOSAL CONSIDERATION
Dispose of product in accordance with local, state or provincial and federal regulations. Check with local municipal authority to ensure compliance.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN Number</th>
<th>1169</th>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Extracts, aromatic, liquid</td>
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<tr>
<td>Transport hazard class</td>
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<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>US DOT Shipping Description (Land)</td>
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<tr>
<td>Proper shipping name</td>
<td>Extracts, aromatic, liquid</td>
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<tr>
<td>Packaging group</td>
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<td>IMO-IMDG Shipping Description (Sea)</td>
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<td>Packaging group</td>
<td>III</td>
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<tr>
<td>IATA Shipping Description (Air)</td>
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<td>Extracts, aromatic, liquid</td>
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<td>Class</td>
<td>3</td>
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<tr>
<td>Packaging group</td>
<td>III</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION
GHS Hazard Statements  
Refer to Section 2.

GHS Precautionary Statements  
Refer to Section 2.

16. OTHER INFORMATION

Revision date : October 22, 2018

Disclaimer & Caution

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