SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier

Product code: GU102
Product Name: GUAIFENESIN, USP

Other means of identification

Synonyms:
1,2-Dihydroxy-3-(2-methoxyphenoxy)propane
Glycerin guaiacolate
Glycerinmonoguaiacol ether
Glycero-guaiacol ether
Glycerol guaiacolate
Glycerol alpha-(o-methoxyphenyl)ether
Glycerol-alpha-monoguaiacol ether
Glycerol mono(2-methoxyphenyl)ether
Glyceryl guaiacolate
alpha-Glyceryl guaiacolate ether
Glyceryl guaiacyl ether
Glycotuss
Gnaifenesin
Guajacol-glycerinaether (German)
Guaiacolglycerinether
Guaiacol glyceryl ether
Guaiacurane
Guaiacyl glyceryl ether
Guaiammar
Guaianesin
Guaiaphenesine
Guaiaphesin
Guajacol-alpha-glycerinether
Guayanesin
Guiaphenesin

CAS #: 93-14-1
RTECS #: TY8400000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against: No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.

Preparation Date: 8/4/2015
Revision Date: 7/6/2018
Revision Number: G2
2. HAZARDS IDENTIFICATION

Classification
This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| Acute toxicity - Oral | Category 4 |

Label elements

Warning

Hazard statements
Harmful if swallowed

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>93-14-1</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you
have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
- May cause skin irritation
- May cause eye irritation

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO2). Water spray mist or foam.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide.

**Specific hazards:** May be combustible at high temperatures. When heated to decompositon it emits acrid smoke and irritating fumes.

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment: Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up: Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Remove all sources of ignition. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store away from incompatible materials.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
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<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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Canada

<table>
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<th>Canada - British Columbia</th>
<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<td>93-14-1</td>
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<td>None</td>
</tr>
</tbody>
</table>

Australia and Mexico

Product code: GU102  Product name: GUAIFENESIN, USP
### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

**Eye protection:** Safety glasses with side-shields

**Skin and body protection:** Gloves  
- Long sleeved clothing  
- Chemical resistant apron

**Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Appearance:</th>
<th>Color:</th>
</tr>
</thead>
</table>

**Odor:** Characteristic.

**Taste**  
- Bitter.

**Formula:** C10H14O4

**Molecular/Formula weight:** 198.22 g/mole

**Flammability:** No information available

**Flash point (°C):** 176

**Flashpoint (°C/°F):** 176°C (348.8°F)

**Flash Point Tested according to:** Closed cup

**Autoignition Temperature (°C/°F):** 550°C (1022°F)

**Lower Explosion Limit (%):** No information available

**Upper Explosion Limit (%):** No information available

**Melting point/range(°C/°F):** 78-82°C (172.4-179.5°F)

**Decomposition temperature(°C/°F):** No information available

**Boiling point/range(°C/°F):** 215°C (419°F) at 19 mmHg

**Bulk density:** No information available

**Density (g/cm3):** No information available

**Specific gravity:** 0.6

**pH:** No information available

**Vapor pressure @ 20°C (kPa):** No information available

**Evaporation rate:** No information available

**Vapor density:** 6.8

**VOC content (g/L):** No information available

**Odor threshold (ppm):** No information available

**Partition coefficient (n-octanol/water):**
10. STABILITY AND REACTIVITY

Reactivity
- Reactive with oxidizing agents
- Reactive with alkalis

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid:

Incompatible Materials:
- Oxidizing agents
- Alkalis

Hazardous decomposition products:
- Carbon oxides.

Other Information
Corrosivity:
- Non-corrosive in presence of glass.

Special Remarks on Corrosivity:
- No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
- Inhalation. Ingestion.

Acute Toxicity

Component Information

<table>
<thead>
<tr>
<th>Guaifenesin</th>
<th>CAS-No.</th>
<th>93-14-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50/oral/rat</td>
<td>1510 mg/kg Oral LD50 Rat</td>
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</tr>
<tr>
<td>LD50/oral/mouse</td>
<td>690 mg/kg Oral LD50 Mouse</td>
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<tr>
<td>LD50/dermal/rabbit</td>
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<tr>
<td>LD50/dermal/rat</td>
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</tr>
<tr>
<td>LC50/inhalation/rat</td>
<td>No information available</td>
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</table>

Product code: GU102  Product name: GUAIFENESIN, USP
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 2553 mg/kg Oral LD50 Rabbit

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 1510 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 690 mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms
Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Inhalation May cause irritation of respiratory tract.
Ingestion May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. May affect behavior/central nervous system (headache, drowsiness, dizziness, ataxia, convulsions, altered sleep time), autonomic nervous system (smooth muscle relaxant), respiration (respiration depression, difficulty breathing, shortness of breath, chronic pulmonary edema), urinary system (hematuria).

Aspiration hazard
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Chronic Toxicity
No information available.

Sensitization:
No information available.

Mutagenic Effects:
No information available

Carcinogenic effects:
Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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</table>

ACGIH (American Conference of Governmental Industrial Hygienists)

Product code: GU102  Product name: GUAIFENESIN, USP
IARC (International Agency for Research on Cancer)  
NTP (National Toxicology Program)  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity  
No data is available

Reproductive Effects:  
No information available

Developmental Effects:  
No information available

Teratogenic Effects:  
No information available

Specific Target Organ Toxicity

STOT - single exposure  
No information available.

STOT - repeated exposure  
No information available.

Target Organs:  
Lungs. Nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:  
No data available.

Persistence and degradability:  
No information available

Bioaccumulative potential:  
No information available.

Mobility:  
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:  
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:  
Empty containers should be taken for local recycling, recovery or waste disposal

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<thead>
<tr>
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<tbody>
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</table>

14. TRANSPORT INFORMATION

DOT

UN-No:  
Not Regulated

Proper Shipping Name:  
No information available

Hazard Class:  
No information available

Subsidiary Class  
No information available

Packing group:  
No information available

Emergency Response Guide Number  
No information available

Marine Pollutant:  
No data available

DOT RQ (lbs):  
No information available

Product code:  GU102  
Product name:  GUAIFENESIN, USP
15. REGULATORY INFORMATION

International Inventories

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<tbody>
<tr>
<td>Guaifenesin</td>
<td>93-14-1</td>
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<td>Present KE-18029</td>
<td>Present</td>
<td>Present (3)-588,(3)-57 6</td>
<td>Not present</td>
<td>Present</td>
<td>Present 202-222-5</td>
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Product code: GU102
Product name: GUAIFENESIN, USP
U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Carcinogen</th>
<th>Developmental Toxicity Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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</table>

CERCLA/SARA

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
<tr>
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U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>93-14-1</td>
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<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

WHIMIS 2015 - GHS Classifications

WHIMIS 2015 Hazard Classification Information:
The WHIMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation
This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHIMIS 1988 Hazard Class
The classification of this product has not been validated yet

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Components</th>
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<th>CEPA Schedule I - Chemicals Covered under the CPR</th>
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<tbody>
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</table>
EU Classification

EU GHS - SV - CLP 1272/2008

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>EU GHS - SV - CLP (1272/2008)</th>
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<tbody>
<tr>
<td>Guaifenesin</td>
<td>93-14-1</td>
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</table>

EU - CLP (1272/2008)

R-phrase(s)
R22 - Harmful if swallowed.

S-phrase(s)
S 2 - Keep out of the reach of children.
S46 - If swallowed, seek medical advice immediately and show this container or label.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xn - Harmful.

16. OTHER INFORMATION

Preparation Date: 8/4/2015
Revision Date: 7/6/2018
Prepared by: Sonia Owen

Disclaimer:
All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

Product code: GU102
Product name: GUAIFENESIN, USP