1. IDENTIFICATION

Product code: GU102
Product Name: GUAIFENESIN, USP

Other means of identification
1. IDENTIFICATION

**Synonyms:**

- Aresol
- Cortussin
- Creson
- 1,2-Dihydroxy-3-(2-methoxyphenoxy)propane
- Dilyn
- My 301
- Mucostop
- Myocaine
- Myorelax
- Myoscaine
- Oresol
- Oreson
- 2-G
- G 87
- Gaiamar
- GGE
- GGG
- Glycerin guaiacolate
- Glycerinmonoguaiacol ether
- Glyceruco-guaiacol ether
- Glycerol guaiacolate
- Glycerol-alpha-guajakolether (Czech)
- Glycerol alpha-(o-methoxyphenyl)ether
- Glycerol-alpha-monoguaiacol ether
- Glycerol mono(2-methoxyphenyl)ether
- Glycerol guaiacolate
- alpha-Glycerol guaiacolate ether
- Glyceryl guaiacol ether
- Glycotuss
- Gnaifenesin
- Guajacol-glycerinaether (German)
- Guaiacolglicerinetere
- Guaiacol glyceryl ether
- Guaiacurate
- Guaiacyl glyceryl ether
- Gaiamar
- Guaianesin
- Guaifenesin
- Guaiaphenesine
- Guairophesin
- Guajacol-alpha-glycerinether
- Guajacuran
- Guajamar
- Guanar
- Guayanesin
- Guiaphenesin
- Hustosil
- Metfenossidiolo
- Methoxypropanediol
- 3-o-Methoxyphenoxypropane 1:2-diol
- 3-(o-Methoxyphenoxy)-1,2-propanediol
- 3-(2-Methoxyphenoxy)-1,2-propanediol
- o-Methoxyphenyl glyceryl ether
- Methphenoxydiol
- Metossipropandiolo
- Miocurin
- Miorelax
- Neurotote
1. IDENTIFICATION

1,2-Propanediol, 3-(2-methoxyphenoxy)-
Reduton
Relaxyl-G
Reorganin
Resil
Respenyl
Respil
Resyl
Ritussin
Robitussin
Sirotol
SL-90
Trecid
Propanosedyl
Tennuttus
Tulyn

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.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral Category 4

Label elements

Warning

Hazard statements Harmful if swallowed

Hazards not otherwise classified (HNOC)

Product code: GU102 Product name: GUAIFENESIN, USP
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>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>93-14-1</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures
General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)
Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.
Eye Contact: Flush eye 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 Harmful if swallowed. 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

Product code: GU102 Product name: GUAIFENESIN, USP
Hazardous Combustion Products: Carbon Monoxide. Carbon Dioxide

Specific hazards: May be combustible at high temperatures
When heated to decomposition 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 breathe vapours/dust. Do not ingest. Do not smoke. 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

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: Wear respirator with dust filter. 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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Solid.</td>
</tr>
<tr>
<td>Odor:</td>
<td>Characteristic.</td>
</tr>
<tr>
<td>Formula:</td>
<td>C10H14O4</td>
</tr>
<tr>
<td>Flashpoint (°C/°F):</td>
<td>176°C (348.8°F)</td>
</tr>
<tr>
<td>Lower Explosion Limit (%)</td>
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</tr>
<tr>
<td>Melting point/range(°C/°F):</td>
<td>78-82°C (172.4-179.5°F)</td>
</tr>
<tr>
<td>Decomposition temperature(°C/°F):</td>
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</tr>
<tr>
<td>Vapor pressure @ 20°C (kPa):</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC content (g/L):</td>
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</tr>
<tr>
<td>Viscosity:</td>
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</tr>
<tr>
<td>Appearance:</td>
<td>Crystalline.</td>
</tr>
<tr>
<td>Taste</td>
<td>Bitter.</td>
</tr>
<tr>
<td>Flammability:</td>
<td>No information available</td>
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<tr>
<td>Flash Point Tested according to:</td>
<td>Closed cup</td>
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<tr>
<td>Upper Explosion Limit (%)</td>
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<tr>
<td>Boiling point/range(°C/°F):</td>
<td>215°C (419°F) at 19 mmHg</td>
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<tr>
<td>Decomposition temperature(°C/°F):</td>
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</tr>
<tr>
<td>Density (g/cm³):</td>
<td>No information available</td>
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<tr>
<td>Odor threshold (ppm):</td>
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</tr>
<tr>
<td>Miscibility:</td>
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<tr>
<td>Molecular/Formula weight:</td>
<td>198.22 g/mole</td>
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<tr>
<td>Flash point (°C):</td>
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</tr>
<tr>
<td>Autoignition Temperature (°C/°F):</td>
<td>550°C (1022°F)</td>
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<tr>
<td>pH:</td>
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<tr>
<td>Specific gravity:</td>
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<tr>
<td>Vapor density:</td>
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<tr>
<td>Partition coefficient (n-octanol/water):</td>
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</tr>
<tr>
<td>Solubility:</td>
<td>Soluble in hot water</td>
</tr>
<tr>
<td></td>
<td>Partially soluble in cold water</td>
</tr>
<tr>
<td></td>
<td>Solubility in water: 1g in 20 mL @25°C</td>
</tr>
<tr>
<td></td>
<td>Freely soluble in Ethanol</td>
</tr>
<tr>
<td></td>
<td>Soluble in Chloroform</td>
</tr>
<tr>
<td></td>
<td>Soluble in Glycerol</td>
</tr>
<tr>
<td></td>
<td>Soluble in Propylene glycol</td>
</tr>
<tr>
<td></td>
<td>Soluble in N,N-dimethylformamide</td>
</tr>
<tr>
<td></td>
<td>Practically insoluble in Petroleum Ether</td>
</tr>
<tr>
<td></td>
<td>Moderately soluble in benzene</td>
</tr>
<tr>
<td>Melting point/range(°C/°F):</td>
<td>78-82°C (172.4-179.5°F)</td>
</tr>
<tr>
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<td>Odor threshold (ppm):</td>
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<tr>
<td></td>
<td>Moderately soluble in benzene</td>
</tr>
</tbody>
</table>

## 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:** Heat. Ignition sources. Incompatible materials.
- **Incompatible Materials:** Oxidizing agents. Alkalis.
- **Hazardous decomposition products:** Carbon oxides.

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

---

**Product code:** GU102  **Product name:** GUAIFENESIN, USP
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

Guaiifenesin - 93-14-1

- LD50/oral/rat = 1510 mg/kg Oral LD50 Rat
- LD50/oral/mouse = 690 mg/kg Oral LD50 Mouse
- LD50/dermal/rat = No information available
- LD50/dermal/rabbit = No information available
- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = No information available
- Other LD50 or LC50 information = 2553 mg/kg Oral LD50 Rabbit

Product Information

- LD50/oral/rat = 1510 mg/kg Oral LD50 Rat
- LD50/oral/mouse = 690 mg/kg Oral LD50 Mouse
- LD50/dermal/rabbit = No information available
- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = 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 центральной нервной системы (головная боль, сонливость, головокружение, аталазия, судороги, нарушение сна), симпатико-парасимпатиковую систему (мышц расслабляющие), дыхание (респираторная депRESSION, трудности дыхания, SHORTNESS OF BREATH, хроническая легочная edema), urinary system (гематурия).

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

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
13. DISPOSAL CONSIDERATIONS

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
- UN-No: Not Regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available
- Subsidiary Risk: No information available
- Packing Group: None
- ERG No: No information available
- Marine Pollutant: No data available
- DOT RQ (lbs): No information available

TDG (Canada)
- UN-No: Not Regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available
- Subsidiary Risk: No information available
- Packing Group: No information available
- Description: No information available

ADR
- UN-No: Not Regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available
- Subsidiary Risk: No information available
- Classification Code: No information available
- Description: No information available
- CEFIC Tremcard No: No information available

IMO / IMDG
- UN-No: Not Regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available
- Subsidiary Risk: No information available
- Packing Group: No information available
- Description: No information available
- IMDG Page: No information available
- Marine Pollutant: No information available
- MFAG: No information available
- Maximum Quantity: No information available

RID
- UN-No: Not Regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available

Product code: GU102  Product name: GUAIFENESIN, USP
14. TRANSPORT INFORMATION

Subsidiary Risk: No information available
Packing Group: No information available
Classification Code: No information available
Description: No information available

ICAO
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

IATA
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</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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</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>Present</td>
<td>Present KE-18029</td>
<td>Present (3)-588 (3)-576</td>
<td>Not present</td>
<td>Present</td>
<td>Present</td>
<td>Present 202-222-5</td>
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</tbody>
</table>

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>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity:</th>
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</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</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>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</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>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Canada

WHMIS hazard class:
Non-controlled

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>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>Present</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

EU Classification

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>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaifenesin</td>
<td></td>
<td>No information</td>
<td></td>
</tr>
</tbody>
</table>

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

Indication of danger:
Xn - Harmful.

16. OTHER INFORMATION
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