MucuSol™ Safety Data Sheet 
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations 
Date of issue: 10/19/2017 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form : Mixture 
Product name : MucuSol™ 
Alternate means of identification : RespiVet 

1.2. Relevant identified uses of the substance or mixture and uses advised against 
Use of the substance/mixture : Liquid Expectorant for Poultry and Swine 

1.3. Details of the supplier of the safety data sheet 
Animal Science Products, Inc. 
3418 Rayburn Drive 
Nacogdoches, TX 75961 
Phone: 936.560.0003 

1.4. Emergency telephone number 
Emergency number : 24 Hour Contact - CHEMTREC 1-800-424-9300 

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture 
Classification (GHS-US) 
Skin Irrit. 2 H315 
Eye Irrit. 2A H319 
Full text of H-phrases: see section 16 

2.2. Label elements 
GHS-US labeling 
Hazard pictograms (GHS-US) : 

Signal word (GHS-US) : Warning 
Hazard statements (GHS-US) : H315 - Causes skin irritation 
H319 - Causes serious eye irritation 
Precautionary statements (GHS-US) : P264 - Wash hands and other exposed areas thoroughly after handling 
P280 - Wear protective gloves/protective clothing/eye protection/face protection 
P302 + P352 - If on skin: Wash with plenty of water 
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing 
P332+P313 - If skin irritation occurs: Get medical advice/attention 
P337+P313 - If eye irritation persists: Get medical advice/attention 
P362 - Take off contaminated clothing and wash before reuse 

2.3. Other hazards 
No additional information available 

2.4. Unknown acute toxicity (GHS-US) 
None of the ingredients are of unknown toxicity. 

SECTION 3: Composition/information on ingredients 

3.1. Substance 
Not applicable – the product is a mixture
3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
</table>
| 1,2-Propanediol, 3-(2-methoxyphenoxy)- | (CAS No) 93-14-1 | 16 | Acute Tox. 4 (Oral), H302  
Skin Irrit. 2, H315  
Eye Irrit. 2A, H319  
STOT SE 3, H335 |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area.

Hygiene measures: Wash hands and other exposed areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Incompatible products: None known.

Incompatible materials: None known.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>MucuSol™</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1,2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Personal protective equipment: Avoid all unnecessary exposure.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or safety glasses and full face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Not typically required.

Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
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<tbody>
<tr>
<td>Color</td>
<td>Green</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
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<tr>
<td>Odor threshold</td>
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<tr>
<td>pH</td>
<td>No data available</td>
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<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
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<tr>
<td>Explosive properties</td>
<td>No data available</td>
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<tr>
<td>Oxidizing properties</td>
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<tr>
<td>Vapor pressure</td>
<td>2.3 kPa</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.04</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
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<tr>
<td>Relative gas density</td>
<td>0.62</td>
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<tr>
<td>Solubility</td>
<td>No data available</td>
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</table>
Log Pow  : No data available
Log Kow  : No data available
Auto-ignition temperature  : No data available
Decomposition temperature  : No data available
Viscosity  : No data available
Viscosity, kinematic  : No data available
Viscosity, dynamic  : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Product is stable under normal use and storage conditions.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
Extremely high or low temperatures.

10.5. Incompatible materials
None known. Strong acids. Strong bases.

10.6. Hazardous decomposition products
None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity  : Not classified

1.2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>ATE US (oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1510 mg/kg</td>
<td>1510.000 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation  : Causes skin irritation.
Serious eye damage/irritation  : Causes serious eye irritation.
Respiratory or skin sensitization  : Not classified
Germ cell mutagenicity  : Not classified
Carcinogenicity  : Not classified
Reproductive toxicity  : Not classified
Specific target organ toxicity (single exposure)  : Not classified
Specific target organ toxicity (repeated exposure)  : Not classified
Aspiration hazard  : Not classified

Potential Adverse human health effects and symptoms  : No additional information available.
Symptoms/injuries after skin contact  : Causes skin irritation.
Symptoms/injuries after eye contact  : Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available
**12.2. Persistence and degradability**

<table>
<thead>
<tr>
<th>MucuSol™</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Not established.</td>
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</tbody>
</table>

**12.3. Bioaccumulative potential**

<table>
<thead>
<tr>
<th>MucuSol™</th>
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</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

Other information: Avoid release to the environment.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste disposal recommendations: Dispose in a safe manner in accordance with local, state and federal regulations.

Ecology - waste materials: Avoid release to the environment.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**

In accordance with DOT

Not regulated for transport

**Additional information**

**ADR**

No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

<table>
<thead>
<tr>
<th>MucuSol™</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
<td>Skin corrosion or irritation</td>
</tr>
<tr>
<td></td>
<td>Serious eye damage or irritation</td>
</tr>
</tbody>
</table>

**1,2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. International regulations**

**CANADA**

**1,2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)**

Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

**1,2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

National regulations
1,2-Propanediol, 3-(2-methoxyphenoxy)- (93-14-1)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations
No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore be construed as guaranteeing any specific property of the product.