

SAFETY DATA SHEET

MUCINEX® COLD & FLU ARCTIC BURST



HEALTH • HYGIENE • HOME

1. Product and company identification

- Product name** : MUCINEX® COLD & FLU ARCTIC BURST
- Distributed by** : RB Health (US) LLC
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600
- Emergency telephone number (Medical)** : 1-800-338-6167
- Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887
- Website:** : <http://www.rbnainfo.com>
- Product use** : Cough Suppressant and Analgesic.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

- SDS #** : D8207316 v2.0
- Formulation #:** : 3008800 v2.0

2. Hazards identification

- Classification of the substance or mixture** : Not classified

GHS label elements

- Hazard pictograms** : Not applicable.
- Signal word** : No signal word.
- Hazard statements** : No known significant effects or critical hazards.
- Precautionary statements**
- General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Prevention** : Not applicable.
- Response** : Not applicable.
- Storage** : Not applicable.

D8207316 v2.0

2. Hazards identification

- Disposal** : Not applicable.
- Supplemental label elements** : None known.
- Hazards not otherwise classified** : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Glycerol	15 - 30	56-81-5
paracetamol	2.5 - 5	103-90-2
guaifenesin	1 - 2.5	93-14-1
Morphinan, 3-methoxy-17-methyl-, hydrobromide, monohydrate,(9.alpha.,13.alpha.,14.alpha.)-	< 0.1	6700-34-1
phenylephrine hydrochloride	< 0.1	61-76-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

- Eye contact** : In case of contact with eyes, rinse immediately with plenty of water. If irritation persists, get medical attention.
- Inhalation** : In the event of any complaints or symptoms, avoid further exposure. Maintain an open airway. Get medical attention if adverse health effects persist or are severe.
- Skin contact** : In the event of any complaints or symptoms, avoid further exposure. Rinse skin with water. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Get medical attention if adverse health effects persist or are severe. Do not induce vomiting. If affected person is conscious, give plenty of water to drink.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : May cause eye irritation upon direct contact with eyes.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

D8207316 v2.0

4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container.

D8207316 v2.0

6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
 See Section 1 for emergency contact information.
 See Section 8 for information on appropriate personal protective equipment.
 See section 13 for waste disposal information.

7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

D8207316 v2.0

8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : None required. However, use of adequate ventilation is good industrial practice.

9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Green.
- Odor** : Menthol-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Flow time (ISO 2431)** : Not available.

10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Do not store above the following temperature: 25°C
Do not store below the following temperature: 20°C
- Incompatible materials** : Do not use with other products.

D8207316 v2.0

10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
paracetamol	LD50 Oral	Rat	1944 mg/kg	-
guaifenesin	LD50 Oral	Rat	1510 mg/kg	-
phenylephrine hydrochloride	LD50 Oral	Rat	350 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : May cause eye irritation.

Respiratory : No known significant effects or critical hazards.

Sensitization

Not available.

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Classification

Product/ingredient name	OSHA	IARC	NTP
paracetamol	-	3	-

Reproductive toxicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

D8207316 v2.0

11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause eye irritation upon direct contact with eyes.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : No known significant effects or critical hazards.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

D8207316 v2.0

11. Toxicological information

Route	ATE value
Oral	36711.8 mg/kg

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Glycerol	Acute LC50 10000 mg/l Fresh water	Daphnia	24 hours
paracetamol	Acute LC50 5000 mg/l Fresh water	Fish	24 hours
	Acute EC50 4.8 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 814000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Glycerol	OECD 301D Ready Biodegradability - Closed Bottle Test	92 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Glycerol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Glycerol	-1.76	-	low
paracetamol	0.4	3.162	low
guaifenesin	1.39	-	low
phenylephrine hydrochloride	-0.31	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

D8207316 v2.0

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not Regulated	Not applicable.	Not available.	-		-
TDG Classification	Not Regulated	Not applicable.	Not available.	-		-
Mexico Classification	Not Regulated	Not applicable.	Not available.	-		-
IMDG Class	Not Regulated	Not applicable.	Not available.	-		-
IATA-DGR Class	Not Regulated	Not applicable.	Not available.	-		-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

D8207316 v2.0

15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
paracetamol	2.5 - 5	Yes.	No.	No.	Yes.	No.
guaifenesin	1 - 2.5	No.	No.	No.	Yes.	No.
phenylephrine hydrochloride	< 0.1	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; PROPYLENE GLYCOL; 1,2-PROPANEDIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL; 1,2-PROPANEDIOL

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

Label elements

Precautionary measures : Avoid contact with eyes.
Read label before use.
Keep out of reach of children.

D8207316 v2.0

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		0
Physical hazards		0
Personal protection		A

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

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Version : 2.0
Prepared by : Reckitt Benckiser India Ltd
 Plot No 48
 Sector - 32
 Institutional Area
 Gurgaon, Haryana
 India - 122001

D8207316 v2.0

16. Other information

Revision comments : Project gemini-change in business address on section 1

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Mucinex Liquid



HEALTH • HYGIENE • HOME

1. Product and company identification

- Product name** : Mucinex Liquid
- Distributed by** : RB Health (US) LLC
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600
- Emergency telephone number (Medical)** : 1-800-338-6167
- Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887
- Website:** : <http://www.rbnainfo.com>
- Product use** : Cough Suppressant and Analgesic.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

- SDS #** : D8207316 v3.0
- Formulation #:** : FF3075675 v3.0

2. Hazards identification

- Classification of the substance or mixture** : Not classified

GHS label elements

- Hazard pictograms** : Not applicable.
- Signal word** : No signal word.
- Hazard statements** : No known significant effects or critical hazards.
- Precautionary statements**
- General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Prevention** : Not applicable.
- Response** : Not applicable.
- Storage** : Not applicable.

D8207316 v3.0

2. Hazards identification

- Disposal** : Not applicable.
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- Hazards not otherwise classified** : None known.

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Description of necessary first aid measures

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- Inhalation** : In the event of any complaints or symptoms, avoid further exposure. Maintain an open airway. Get medical attention if adverse health effects persist or are severe.
- Skin contact** : In the event of any complaints or symptoms, avoid further exposure. Rinse skin with water. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Get medical attention if adverse health effects persist or are severe. Do not induce vomiting. If affected person is conscious, give plenty of water to drink.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : May cause eye irritation upon direct contact with eyes.
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watering
redness
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D8207316 v3.0

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Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

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Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container.

D8207316 v3.0

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 See Section 1 for emergency contact information.
 See Section 8 for information on appropriate personal protective equipment.
 See section 13 for waste disposal information.

7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : If operating conditions cause high dust concentrations to be produced, use dust goggles.
- Skin protection**

D8207316 v3.0

8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : None required. However, use of adequate ventilation is good industrial practice.

9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Green.
- Odor** : Menthol-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Flow time (ISO 2431)** : Not available.

10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Do not store above the following temperature: 25°C
Do not store below the following temperature: 20°C
- Incompatible materials** : Do not use with other products.

D8207316 v3.0

10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
paracetamol	LD50 Oral	Rat	1944 mg/kg	-
guaifenesin	LD50 Oral	Rat	1510 mg/kg	-
phenylephrine hydrochloride	LD50 Oral	Rat	350 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
Eyes : May cause eye irritation upon direct contact with eyes.
Respiratory : No known significant effects or critical hazards.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
Respiratory : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Classification

Product/ingredient name	OSHA	IARC	NTP
paracetamol	-	3	-

Reproductive toxicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

D8207316 v3.0

11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause eye irritation upon direct contact with eyes.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : No known significant effects or critical hazards.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

D8207316 v3.0

11. Toxicological information

Route	ATE value
Oral	36711.8 mg/kg

12. Ecological information**Toxicity**

Product/ingredient name	Result	Species	Exposure
Glycerol	Acute LC50 10000 mg/l Fresh water	Daphnia	24 hours
paracetamol	Acute LC50 5000 mg/l Fresh water	Fish	24 hours
	Acute EC50 4.8 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 814000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Glycerol	OECD 301D Ready Biodegradability - Closed Bottle Test	92 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Glycerol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Glycerol	-1.76	-	low
paracetamol	0.4	3.162	low
guaifenesin	1.39	-	low
phenylephrine hydrochloride	-0.31	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

D8207316 v3.0

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not Regulated	Not applicable.	Not available.	-		-
TDG Classification	Not Regulated	Not applicable.	Not available.	-		-
Mexico Classification	Not Regulated	Not applicable.	Not available.	-		-
IMDG Class	Not Regulated	Not applicable.	Not available.	-		-
IATA-DGR Class	Not Regulated	Not applicable.	Not available.	-		-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

D8207316 v3.0

15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
paracetamol	2.5 - 5	Yes.	No.	No.	Yes.	No.
guaifenesin	1 - 2.5	No.	No.	No.	Yes.	No.
phenylephrine hydrochloride	< 0.1	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; PROPYLENE GLYCOL; 1,2-PROPANEDIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL; 1,2-PROPANEDIOL

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

Label elements

Precautionary measures : Avoid contact with eyes.
Read label before use.
Keep out of reach of children.

D8207316 v3.0

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		0
Physical hazards		0
Personal protection		A

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

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 Plot No 48
 Sector - 32
 Institutional Area
 Gurgaon, Haryana
 India - 122001

D8207316 v3.0

16. Other information

Revision comments : PSDS update

✔ Indicates information that has changed from previously issued version.

Notice to reader

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