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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: GUAIFENESIN

Synonym: Glyceryl guaiacolate, Guaiacol glyceryl ether, Guaiphenesin

Chemical Name: 1,2-Propanediol, 3-(2-methoxyphenoxy)-(±)-

CAS Number: 93-14-1

RTECS Number: TY8400000

Chemical Formula: C₁₀H₁₄O₄

Use: For manufacturing, Process, or Repacking. Used as an expectorant in medications

Product Code: 211

Manufacturer: Delta Synthetic Co., Ltd.

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SECTION 2 - HAZARDS IDENTIFICATION

Classification of Substance: Irritant; Harmful

Physical Hazards: Not classified

Health Hazards:

Acute toxicity (oral) – Category 4.

Serious eye damage/eye irritation – Category 2A.

Respiratory irritation – Category 3.

Label Elements:

Hazards Pictograms:



Signal Word: Warning

Hazard Statement: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hand thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: Guaifenesin

CAS Number: 93-14-1

Molecular Weight: 198.2 g/mole

Composition: 100% by Weight

SECTION 4 - FIRST AID MEASURES

Inhalation: May cause irritation. Remove to fresh air.

Eye: May cause irritation. Flush with copious quantities of water.

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Skin: May cause irritation. Flush with copious quantities of water.

Ingestion: May cause irritation and bitter taste. Flush out mouth with water. This material is readily absorbed from the gastrointestinal tract. Do not induce vomiting.

Adverse Effects: Adverse effects may include gastrointestinal discomfort, drowsiness, rash, dizziness, headache, nausea, vomiting, and diarrhea. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

Chronic: Possible hypersensitization.

Cross Sensitivity: Not available

Target Organs: Not available

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, chronic respiratory problems (asthma, bronchitis, emphysema), cough with excess phlegm, and porphyria.

General First Aid Procedures: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

NOTE TO PHYSICIANS

Overdose Treatment: For current information about the treatment of overdose, consult a certified Regional Poison Control Center by calling the number listed in your local telephone directory.

For additional information on toxicity, see Section 11.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear appropriate personal protective equipment.

Spill response: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

SECTION 7 - HANDLING AND STORAGE

Handling: As a general rule, when handling this material, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in well-closed, light resistant container. This material should be handled and stored per label instructions to ensure product integrity.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Engineering controls such as exhaust ventilation are recommended.

Respiratory Protection: Use a NIOSH-approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. If material is in solid form, the use of an approved dust mask is recommended.

Gloves: Chemically compatible

Eye Protection: Safety goggles or glasses

Protective Clothing: Protect exposed skin.

Exposure Limits: not available

Biological limit values: No biological exposure limits noted for the ingredient(s).

Individual Protection Measures, such as Personal Protective Equipment:

Eye/face Protection: Safety glasses with side-shields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.

Skin and Hand Protection: Chemically compatible gloves. For handling solutions, ensure that the glove material is

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protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic non-latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Other: For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home contamination.

Respiratory Protection: Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134).

Thermal hazards: Not available.

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White or pale gray crystalline powder; odorless or slight characteristic odor.

pH: 5–6.5 (10g/L, water)

Melting Range: 78–82 °C

Boiling Point: 215 °C / 19 mm Hg

Flash Point: 176 °C (closed cup)

Autoignition Temperature: 550 °C

Vapor Density: 6.8

Specific Gravity: 0.6 at 20 °C

Solubility in Water: Soluble

Other Solubility: Soluble in alcohol, in chloroform, and in propylene glycol; slightly soluble in ether; sparingly soluble in glycerine.

Partition Coefficient: n-octanol/water: 1.39

Percent Volatile: not available

Reactivity in Water: not available

Explosive Properties: not available

Oxidizing Properties: not available

Formula: C₁₀H₁₄O₄

Molecular Weight: 198.2 g/mole

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended conditions of use.

Conditions to Avoid: not available

Incompatibilities: Strong acids, strong bases, strong oxidizing agents.

Decomposition Products: When heated to decomposition, material emits acrid smoke and irritating fumes. Emits toxic fumes under fire conditions.

Hazardous Polymerization: No

SECTION 11 - TOXICOLOGICAL PROPERTIES

Routes of Entry: Inhalation, ingestion

RTECS No: TY8400000

LD₅₀ (oral-rat): 1510 mg/kg

LD₅₀ (oral-mouse): 690 mg/kg

Irritancy Data: not available

Corrosive Potential: not available

Sensitization Data: not available

Listed as a Carcinogen by:

NTP: No

IARC: No

OSHA: No

Other Carcinogenicity Data: No

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Mutagenicity Data: not available

Reproductive and Developmental Effects: Some studies have found a possible relationship between Guaifenesin and inguinal hernias in the newborn, but this was not found in other studies.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No data available.

BOD5 and COD: No data available.

Biodegradation: No data available.

Bioaccumulation and Mobility: Log Pow: 1.39, mobile substance, likely to migrate into aquatic environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Dispose of waste in accordance with all applicable local, regional, national, and international laws.

SECTION 14 - TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provision for Transport: Not applicable.

Transportation Regulation:

UN Classification: Not applicable

IATA/ICAO (air): Not classified

IMDG (sea): Not classified

ADR/RID (road/railway): Not classified

SECTION 15 - REGULATORY INFORMATION

U.S. Regulatory Information: not available

International Regulatory Information: EINECS # 202-222-5

Hazard code: Xn- Harmful

Risk phrases:

R22: Harmful if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

Safety phrases:

S36/37: Wear suitable protective clothing and gloves.

European Regulatory Information: 1272/2008

Hazard Statements:

H302: Harmful if swallowed.

H317: May cause an allergic skin reaction.

H320: Causes eye irritation.

H335: May cause respiratory irritation.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements:

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash hand thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P285: In case of inadequate ventilation wear respiratory protection.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

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

Health: 2

Flammability: 1

Reactivity: 0

SECTION 16 - OTHER INFORMATION

Reference:

1. United States Department of Labor, *A guide to the Globally Harmonized System of Classification and Labelling of Chemicals* (GHS), Issued date: 10/27/2009.
2. USP, Guaifenesin MSDS, Issued date: 6/22/2007.
3. EDQM, Guaifenesin MSDS (revision 03), Issued date: 3/14/2008.
4. Regulation (EC) No. 1272/2008 of the European parliament and of the council, Issued date: 12/31/2008.

Reasons for revision:

1. Added Hazard & Precautionary Statements of the Regulation (EC) No. 1272/2008 in section 15.
2. Added Hazardous Materials Identification System (HMIS) (U.S.A.) and National Fire Protection Association (U. S. A.) classification in section 15.
3. Revision to conform to Safety Data Sheet format as per OSHA Hazard Communication Standard 29 CFR 1910.1200.

Revision Date: March 31, 2015

Previous Revision Date: Jan. 31, 2013

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