

## Material Safety Data Sheet

According to ISO 11014-1

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1. IDENTIFICATION OF SUBSTANCE	
<b>Name:</b>	<b>SMOG ENEMAS</b>
<b>Manufacturer:</b>	Department of Pharmacy Duke University Medical Center Box 3089 Durham, NC 27710 919-684-5125
<b>Information Department:</b>	Occupational and Environmental Safety Office Duke University Medical Center Box 3914 Durham, NC 27710 919-684-5996
<b>Emergency Information:</b>	Regional Poison Control Center 800-848-6946
2. COMPOSITION/INFORMATION ON INGREDIENTS	
<b>Chemical Characterization/Description:</b> Mineral oil, milk of magnesia, glycerin, and sorbitol solution	
<b>Synonym(s):</b> Milk of magnesia: magnesium hydroxide; Glycerin: glycerol, glycerine, trihydroxypropane; Sorbitol: glucitol, sorbol	
<b>Dangerous Components (CAS#, Hazardous Chemical, Percent):</b>	
8012-95-1	Mineral oil 25%
1309-42-8	Milk of magnesia 25%
56-81-5	Glycerin 25%
50-70-4	Sorbitol 25%
3. HAZARDS IDENTIFICATION	
<b>Hazard Description:</b>	
Mineral oil is a laxative and eye irritant. Milk of magnesia has a laxative effect. Glycerin is a poison by subcutaneous route and mildly toxic by ingestion. It is a skin and eye irritant and in the form of a mist, it is a nuisance particulate and inhalation irritant. Sorbitol is mildly toxic by ingestion. Product may be combustible. (Hazard description based on concentrated constituents; this product is compounded mixture.)	
<b>NFPA Ratings (scale 0-4):</b>	
Health	3
Fire:	1
Reactivity:	0

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**4. FIRST AID MEASURES**

**Inhalation:**

Remove victim to fresh air. Give oxygen or artificial respiration if necessary.

**Skin Contact:**

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. Seek medical attention if warranted.

**Eye Contact:**

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

**Ingestion:**

DO NOT INDUCE VOMITING.

If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open, and lay the victim on his/her side with the head lower than the body. Transport the victim IMMEDIATELY to a hospital.

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<b>5. FIRE-FIGHTING MEASURES</b>
<p><b>Suitable Extinguishing Agents:</b></p> <p>Use alcohol foam, CO<sub>2</sub>, or dry chemical to fight fire. Consider appropriate extinguishing media for surrounding fire. Product may be combustible when heated.</p> <p><b>Protective Equipment:</b></p> <p>Self-contained breathing apparatus and protective equipment for fire fighting.</p>
<b>6. ACCIDENTAL RELEASE MEASURES</b>
<p><b>Personnel Precautions:</b></p> <p>Wear gloves (neoprene) and eye protection (chemical splash goggles).</p> <p><b>Environmental Precautions:</b></p> <p>None necessary under normal conditions of use.</p> <p><b>Measures for Cleaning/Collection:</b></p> <p>Use absorbent paper to pick up all liquid spill material. Seal the absorbent paper, as well as contaminated clothing, in a vapor-tight plastic bag for eventual disposal. Wash all contaminated surfaces with a soap and water solution.</p>
<b>7. HANDLING AND STORAGE</b>
<p><b>Handling:</b></p> <p>Wear PPE when handling this material. Wash hands after handling.</p>
<p><b>Storage:</b></p> <p>Store in a cool, dry, well-ventilated location.</p>

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**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Engineering Controls:**

None necessary under conditions of normal use.

**Control Parameters:**

<u>Chemical</u>	<u>Limit</u>	<u>Reference</u>
Mineral oil	N/A	N/A
Milk of magnesia	N/A	N/A
Glycerin	10 ppm	ACGIH TLV-TWA (mist)
Sorbitol	N/A	N/A

**Personal Protective Equipment:**

**Respiratory Protection**

None necessary under conditions of normal use.

**Skin Protection**

Wear gloves (neoprene) when using this chemical. If this chemical comes into contact with your gloves, or if a tear/puncture develops, remove gloves at once and wash hands.

**Eye Protection**

Splash-proof safety goggles should be worn while handling this chemical.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Viscous liquid

**Color and Odor:** Oil/viscous liquid mixture over white precipitate

**pH:** N/A

**Boiling/Freezing Points (°C):** N/A

**Flashpoint (°C):** N/A

**Autoignition Temperature (°C):** N/A

**Explosion Properties:** N/A

**Vapor Pressure (mm Hg):** N/A

**Vapor Density (air = 1):** N/A

**Solubility:** N/A

**Specific Gravity (water = 1):** N/A

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**10. STABILITY AND REACTIVITY**

**General:** This product is considered stable.

**Materials to Avoid:** Oxidizers and heat.

**Hazardous Decomposition Products:** When heated to decomposition, product may emit acrid smoke and irritating fumes.

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity:** Mineral oil is a laxative and eye irritant. It has an oral LD<sub>50</sub> of 22 g/kg (mouse). Milk of magnesia may have a laxative effect. Glycerin is a poison by subcutaneous route, is mildly toxic by ingestion, and is a skin and eye irritant. It may be readily absorbed through the skin. In the form of a mist, glycerin is a nuisance particulate and inhalation irritant. The oral LD<sub>50</sub> for glycerin is 4090 mg/kg (mouse); the subcutaneous LD<sub>50</sub> is 91 mg/kg (mouse). Sorbitol is mildly toxic by ingestion.

**Signs/Symptoms of Overexposure:** Inhalation of mineral oil vapors/particulate can cause aspiration pneumonia. Other symptoms include lipid granuloma, lipid pneumonia, dermatitis, oil acne and melanosis. Ingestion of mineral oil prevents absorption of Vitamin A from intestinal contents and may interfere with water absorption. Milk of magnesia has a laxative effect. Exposure to glycerin can cause systemic effects such as headache, nausea, vomiting, and irritation of the skin, eyes, and respiratory tract.

**Chronic Toxicity:** According to "Dangerous Properties of Industrial Materials (Sax, 7<sup>th</sup> Ed.), mineral oil is a human carcinogen by inhalation that produces gastrointestinal tumors. It is also a human teratogen by inhalation causing testicular tumors in the fetus. Mineral oils are listed as a known human carcinogen by NTP and IARC. IARC classifies highly refined mineral oils as Group 3 (unclassifiable as to carcinogenicity to humans) and untreated or mildly treated oils as Group 1 (carcinogenic to humans).

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<b>12. ECOLOGICAL EFFECTS</b>
None anticipated under normal conditions of use.
<b>13. DISPOSAL CONSIDERATIONS</b>
Dispose of all waste and contaminated materials associated with this chemical as specified by existing local, state and federal regulations concerning hazardous waste disposal. Contact the Occupational and Environmental Safety Office for specific guidance.
<b>14. TRANSPORT INFORMATION</b>
<b>Proper Shipping Name (DOT):</b> Not regulated by this mode of transportation.
<b>15. REGULATORY INFORMATION</b>
Mineral oil, milk of magnesia, glycerin, and sorbitol are reported in EPA TSCA Inventory. Sorbitol is reported in the EPA Genetic Toxicology Program.
<b>16. OTHER INFORMATION</b>
This information is based on our present knowledge; however this shall not constitute a guarantee for any specific product features. No toxicity data are available on this specific formulation; this health hazard assessment is based on information that is available for its components.