



Notes on "Fake Smoke" Used in the VT Fire Safety House

In the bedroom of the fire safety house, we use a fog machine device that emits a dense vapor that appears similar to fog or smoke. This artificial fog is most commonly used in professional entertainment applications.

Consumer fog machines create the smoke effect by vaporizing a combination of water and a food grade chemical called Ethylene Glycol. This fluid (often referred to colloquially as fog juice) vaporizes or atomizes inside the fog machine. Upon exiting the fog machine and mixing with cooler outside air the vapor condenses, resulting in a thick visible fog.



There have been a number of published studies on the potential health effects presented by exposure to theatrical fogs and artificial mists. The studies found that exposure to fog is safe when used properly, meaning not "over fogging" and when using only fluid recommended by the manufacturer. Additionally, no evidence of serious or permanent health effects was found to be a result of glycol exposure.

Theatrical fog is not considered hazardous to humans, and generally used without problems. However, some people do complain of respiratory problems and throat irritation when exposed to theatrical fog. It is suggested that exposure to the fog should be minimized.



Attached is the SAFETY DATA SHEET for the fog fluid we use.

Q & A

Q: Should children or adults who have asthma go through the smoke demonstration?

A: No. It is not recommended If a child or adult has a throat infection, cold or any respiratory illness, it is recommended that they do not participate in the smoke demonstration. They can view the demo from outside.

Q: What should we do with the children whose parents want them to go through the Fire Safety House but not the smoke demonstration?

A: Do not make these children feel different. Have the teacher point out who these children are and they can go through the entire demonstration, except the smoke portion of the program, together.

If you have any additional questions, please contact the Division of Fire Safety's Public Education and CRR Office at 802-479-7587 for additional information, visit the public education section of our web page.

<https://firesafety.vermont.gov/pubed>



Fog Worx

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of Issue: 05/11/2018 Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Fog Worx

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Party fog liquid for fogging machines

1.3. Details of the supplier of the safety data sheet

Bluewater Chemgroup
1819 S. Calhoun Street
Fort Wayne, IN 46802
Phone: 260-426-6281
Toll Free: 888-697-2626

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Serious eye damage/eye irritation Category 2B H320

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H320 - Causes eye irritation
Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable – product is a mixture

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Glyoertn	(CAS No) 56-81-5	20	Eye Irrit. 2B, H320

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 product 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 : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

Fog Worx

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Symptoms/injuries after eye contact : Causes eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

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. Contain all water used for fire-fighting to the greatest extent possible.

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. Store away from other materials.

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 to prevent formation of vapor.

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 : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerin (56-81-5)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : Ensure that proper ventilation is provided to maintain exposures below regulated limits.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

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

Fog Worx

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 eye contact	: Causes eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Glycerin (56-81-5)	
LC50 fish 1	51 - 57 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and degradability

Fog Worx	
Persistence and degradability	Not established.
Glycerin (56-81-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Fog Worx	
Bioaccumulative potential	Not established.
Glycerin (56-81-5)	
BCF fish 1	(no bioaccumulation)
Log Pow	-1.76
Bioaccumulative potential	Not established.

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

SECTION 15: Regulatory information

15.1. US Federal regulations

Fog Worx	
SARA Section 311/312 Hazard Classes	Serious eye damage or eye irritation
Glycerin (56-81-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule

15.2. International regulations

CANADA

Glycerin (56-81-5)	
Listed on the Canadian DSL (Domestic Substances List)	

Fog Worx

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

EU-Regulations

Glycerin (56-81-5)

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

National regulations

Glycerin (56-81-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
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)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

H320

Causes eye irritation

SDS US (GHS HazCom 2012)

While Sanco Industries, Inc. believes the data set forth is accurate to the best of our knowledge, Sanco Industries, Inc. makes no warranties and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration and verification.