

Mr Mister

AN INTRODUCTION TO AIR PRESSURE FOGGERS

At the present time there are primarily two ways of producing a fog or haze for use in the film television or entertainment industry.

The first and most traditional method is to use a smoke fluid which contains two major components -a viscous fluid capable of producing a thick visible cloud of fine spray when vaporised, and a volatile component which when heated becomes a propellant needed to vaporise the rest of the liquid.

For many years this method of producing a haze was considered to be completely safe and indeed to this day can be found in almost every venue worldwide.

It is true that most of the better quality machines when used with their recommended fluid can produce a haze which can be considered to be completely safe if used in sensible quantities.

The second method of producing a haze is to use a compressed air "cracker", this method uses compressed air forced through tiny nozzles to vaporise the fluid and produce the haze.

As there is no propellant needed in the fluid there is no need for any heat so the fluid that ends up as a haze is exactly the same fluid as was put into the machine originally.

Because of the high pressures emitted from the nozzles in a cracker the fluid is vaporised into much finer droplets than from conventional machines so a cracker haze actually contains a lot less fluid in order to achieve the same effect as a conventional fogger, reducing the risk of saturating the air with fog fluid.

The Mr Mister is a compressed air haze generator so the fluid used contains no heat dependant chemicals nor does it decompose in any way when in a haze form.

Mr Mister

Mr Mister Oil Free Haze Fluid

The primary ingredient of any Haze making system is the haze fluid, the Mr Mister can use either an oil or an oil free fluid.

The Mr Mister oil free water based fluid has been carefully selected to produce an ultra fine long lasting haze without leaving any residues or causing irritation to the human respiratory system.

The fluid contains two principle ingredients:

Distilled water

Distilled water is the purest form of water available and is of no danger whatsoever. ~

It is Glycol which forms the basis of nearly all oil free haze fluids used in machines today, and can be found in many household products such as shampoo or hair gel. There are literally thousands of types of Glycols available but only some of them can be used to produce haze as they need to be hydroscopic (i.e.: be able to absorb moisture from the air) in order to hang in the air for long periods of time without falling to the ground.

The different Glycols differ greatly in purity and consistency and produce different effects when used as a haze fluid, the Glycol used in the Mr Mister fluid is the finest and purist form of Glycol available in a liquid form and thus can produce a very "dean" ultra fine haze.

The following three pages are the official Safety Data sheets giving the health and safety requirements for Mr Mister oil free haze fluid.

Safety Data Sheet

Revision Number: 00

Date: 21 April 1995

1. Identification of the Substance/Preparation and Company Product:
Mr Mister Diffuser Fluid

2. Composition Information on Ingredients

This preparation contains no substances classified on the basis of physico-chemical and health properties under the CHIP Regulations or subject to recognised exposure levels.

3. Hazards identification

Classification: Not required

Symbol:

Risk phrases:

Main hazard:

4. First Aid Measures

Exposure by	Symptom	Treatment
Eye contact	Irritation	Irrigate eye thoroughly with water. If discomfort persists, seek medical attention.
Skin contact	Irritation	Wash with soap and water. Remove and wash contaminated clothing before reuse.
Inhalation		Remove from exposure.

Ingestion

Ingestion is unlikely in normal use. If it occurs, give water to drink and obtain medical attention.

5. Fire fighting measures

Suitable Extinguishing Media: Any. The product is not flammable but residues formed by evaporation may sustain fire and may produce acrid smoke if heated to decomposition.

Special Exposure Hazards:

Special Protective Equipment:

6. Accidental Release Measures

Personal Precautions:

Environmental Precautions:

Decontamination Procedures:

7. Handling and Storage

Handling: Avoid contact with skin and eyes.

Storage: No special requirements

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Substance	8hr TWA	STEL	Source
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There are no limits established for any of the ingredients of this formulation.

Engineering Control Measures:

Recommended personal protection

Eyes: Chemical safety goggles

Hands: Rubber or PVC gloves

Feet:

Skin: Impervious clothing (large quantities only)

9. Physical and Chemical Properties

Physical state: Liquid

Colour: Colourless

Odour:

pH:

Boiling point/Range (OC) :

Flammability: Not Flammable

Oxidising properties:

Vapour Pressure:

Relative density:

Water Solubility: Soluble

10. Stability and Reactivity

Stability: Stable
Conditions to avoid:
Materials to avoid:
Hazardous decomposition products:

11: Toxicological Information

Eyes:
Skin:
Inhalation:
Ingestion:
Chronic health effects:
Other:

12. Ecological Information

Environmental assessment:
Mobility: The preparation is water miscible.
Persistence and Degradability:
Bioaccumulation potential:
Ecotoxicity:

13. Disposal Considerations

All disposal must be via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.
Unused product: As above
Used/contaminated product: As above
Empty Container: Wash out thoroughly with plenty of water and recycle where possible. Otherwise as substance.

14. Transport Information

Not Required

15. Regulatory Information

Labelling: The product is not covered by any regulatory requirement.
Label name:
Symbols: Not Required
Risk phrases:
Safety phrases

16. Other Information

This product is intended for use as the active principle in diffuse haze generating equipment. It should not be used for any other purpose.

The information given above is based on current knowledge and experience and is given in good faith. No warranty, expressed or implied is made, and the data are only relevant to the use for which the product is supplied.

Mr Mister

Mr Mister Oil Based Fluid

The other type of fluid that the Mr Mister can use is an oil-based fluid, the oil fluid gives a slightly thicker haze than the water based fluid but tends to hang around in the air longer, the choice is purely down to personal preference.

Once again the material used for the fluid has been carefully selected to provide the finest possible haze without causing any health risks or leaving any oily residue, however it must be noted that the atmosphere can only hold a certain amount of oil haze at anyone time and that if the air becomes saturated then the excess haze will turn back to a fluid and start to collect on the surrounding surfaces. Please contact your dealer for advice on using oil based fluids.

The Oil based fluid contains only one ingredient:

Pharmaceutical Grade White Mineral Oil

This oil is a hydrocarbon mixture derived from petroleum by distillation, it is colourless, tasteless and generally odour free. It is often used in laxatives and as a solvent for inks in the printing industry and also as a general purpose lubricant.

The following pages contain information on the chemical composition of the oil.

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

TRADE NAME. (as labelled)

DIFFUSION FLUID

*For use in diffusion foggers

SUPPLIERS NAME

CITC

343 S. MONTEZUMA #98

PRESCOTT, AZ 86303

Address (complete mailing address):

Phone number for additional information:

1-602-771-8268

Date prepared or revised

Mar.1, 1990

Name of preparer Michael W. Colvin

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS numbers	Percent	Exposure Limit S In Air (give units)		
			ACGIH TLV	OSHA PEL	Other specify
White Mineral	8012-95-1	100%	5 Mg/M3	OSHA	TWA
Oil, NF	8042-17-5		5 Mg/M3	ACGIH	TWA
			5 Mg/M3	ACGIH	STEL

COMMENTS:

Diffusion fluid is a fully refined white mineral oil meeting the requirements of the National Formulary XVI as well as the food and Drug Admin. As per CFR 172.878

III. PHYSICAL PROPERTIES

Vapour density (air= 1)	N A	Melting point or range, F	N A
Specific gravity	0.83. to 0.9	Boiling point or range, .F	680°F (380°C)
Solubility in water	Insoluble	Evaporation rate (butyl acetate = 1)	Nil @ 25 C
Vapour pressure.mmHg@70C	Less than 0.5mm		
Appearance & odour	Colourless viscous liquid		

HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapour, dust, or mist)

At levels approaching TLV, has an odour similar to burned lubrication oil

Not a required category.

NOTE: All required categories should be addressed. If any item is not applicable, or no information is available, the space must be marked to indicate that.

This voluntary form is provided by Cal/OSHA to assist MSDS preparers and users. Any format may used as long it contains the required information

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IV. FIRE AND EXPLOSION

Flash Point, degF (give method) Greater than 235°F (Closed cup)
Auto ignition temperature, oF
Flammable limits in air, volume % : lower (LEL)- upper (UEL)-
Fire extinguishing materials:
X - water spray - X - carbon dioxide X other: H a l o n
X.- foam X - dry chemical
Special fire fighting procedures: As per 1987 Emergency Response Guidebook
DOT P-5800.4
Unusual fire and explosion hazards:

V. HEALTH HAZARD INFORMATION

SYMPTOMS OF OVEREXPOSURE for each potential route of exposure.
Inhaled: Acute exposure may result in bronchial irritation
Contact with skin or eyes: Acute exposure: No data available
Absorbed through skin: Chronic exposure: May cause contact or eczematous dermatitis
Swallowed: May cause diarrhoea
HEALTH EFFECTS OR RISKS FROM EXPOSURE, Explain in lay terms- Attach extra page if more space is needed.
Acute: In mist form below the ACGIH TLV: None
Chronic: Animal studies indicate that repeated or prolonged exposure may result in mild irritation.

FIRST AID: EMERGENCY PROCEDURE

Eye Contact Wash eyes with large amounts of water/saline solution occasionally lifting upper & lower eyelids until evidence of chemical is clear.
Skin Contact: Wash with soap & water
Inhaled: Remove to fresh air
Swallowed: No specific antidote: Treat symptomatically & supportively

, SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.

YES: Federal OSHA NTP IARC

California employers using Cal/OSHA -regulated carcinogens must register with CJI/OSHA. The Cal/OSHA and Federal OSHA carcinogen lists are similar.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: By serious chronic exposure too refinery workers, evidence indicates contact dermatitis of skin, oil acne, folliculitis, and lipoid granuloma/asthma/pneumonia when respiratory protective devices are not worn.

VI. REACTIVITY DATA

Stability:	X—Stable	-Unstable
Conditions to avoid:	May burn, but does not ignite readily	
Incompatibility (materials to avoid):	Avoid contact with strong oxidizers	
Hazardous decomposition products (including combustion products):	Thermal decomposition of product may include toxic oxides of carbon	
Hazardous polymerization:	May occur	X - Will not occur
Conditions to avoid:	Hazardous polymerisation has not been reported to occur under normal temperatures and pressures.	

VI. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (include employee protection measures): Clean up with sand or other absorbent material and place into clean dry containers for later disposal. (See NOTE)

Preparing wastes for disposal (container types, neutralization, etc.):

NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

VII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:	Provide general dilution ventilation to meet PEL
Respiratory protection (type)	For: 50 Mg/M3 and above, any NIOSH approved supplied air respirator. *Under normal use: NONE
Eye protection (type)	Splash proof or dust resistant. Goggles for spills or fire. *Under normal use; NONE
Gloves(specify material)	Handlers should wear appropriate. Protective gloves to prevent contact with this substance.
Other clothing and equipment	Wear oil impervious clothing, avoid wearing clothing soaked with mineral oil.
Work practices, hygienic practices	Emergency eye wash in event a splashing occurs.
Other handling and storage requirements:	Keep away from flame, heat (150degF max) and oxidizing agents.

Protective measures during maintenance of contaminated equipment