



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME:</b> Photographic Fog		<b>DATE:</b> August 1, 2011	
<b>PRODUCT NUMBER(S):</b> PF-1 (1007724)			
TRADE NAME: Mineral Oil GENERAL USE: Laser beam visualization aid. CHEMICAL FAMILY: Isobutane, Propane, Mineral Oil blend. PRODUCT DESCRIPTION: Odorless, aerosol haze.			
<b>MANUFACTURED FOR:</b> <b>Safariland LLC</b>		<b>DATE PREPARED:</b> August 1, 2011	
ADDRESS (NUMBER, STREET, P.O. BOX) <b>13386 International Parkway</b>		<b>SUPERSEDES:</b> October 1, 2008	
(CITY, STATE AND ZIP CODE) <b>Jacksonville, FL 32218</b>		TELEPHONE NUMBER FOR INFORMATION / Customer Service <b>800-347-1200</b>	
COUNTRY <b>USA</b>		<b>CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER</b>	
			
		<b>1-800-255-3924</b> <b>01-813-248-0585</b> North America Toll Free      International	

## SECTION 2 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**  
 Skin, eye, and respiratory tract irritant. May cause CNS depression. May cause narcosis. Acute overexposure can cause freeze burns to the skin and eyes. Mild bronchial irritation, dermatitis from chronic exposure, mild eye irritation.

**POTENTIAL HEALTH EFFECTS**

**INHALATION:**  
 Dizziness, headache, disorientation, excitation, fatigue, inability to concentrate, vomiting, coughing, anesthesia, unconsciousness, death.

**SKIN:**  
 Capable of causing mild skin irritation. Acute overexposure can cause freeze burns to the skin. Possible dermatitis from chronic exposure.

**EYES:**  
 Capable of causing mild eye irritation. Acute overexposure can cause freeze burns to the eyes.

**INGESTION:**  
 NA as this product is an aerosol gas.

**CARCINOGENICITY:**

NTP? <b>No</b>	IARC MONOGRAPHS? <b>No</b>	OSHA REGULATED? <b>No</b>
CALIFORNIA, Prop.65? <b>Yes</b>	<b>CAS#98012-95-1 Paraffin Oil- carcinogen</b>	ESIS: <b>No</b>

## SECTION 3 - HAZARDOUS INGREDIENTS

Hazardous Components	% (by Weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
<b>Isobutane</b>	<b>NR</b>	<b>75-28-5</b>	<b>200-857-2</b>	<b>F+</b>	<b>R12</b>
<b>Liquid hydrocarbons oil</b>	<b>NR</b>	<b>8012-95-1</b>	<b>232-384-2</b>	<b>None</b>	<b>None</b>
<b>Propane</b>	<b>NR</b>	<b>74-98-6</b>	<b>200-827-9</b>	<b>F+</b>	<b>R12</b>

Notes: Hazard symbols and risk phrases based on maximum listed concentration of each hazardous ingredient.

## SECTION 4 - FIRST AID MEASURES

**INHALATION:**  
 Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYES:**  
 Flush with water for at least 15 minutes. Seek medical attention as condition warrants.

**SKIN:**  
 Flush with plenty of soap and water for at least 15 minutes. Seek medical aid as condition warrants.

**INGESTION:**  
 If victim is alert, give 2 cups of water and induce vomiting. Get medical attention immediately.

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## SECTION 5 - FIRE FIGHTING MEASURES

**GENERAL HAZARDS:**  
Flammable Aerosol Flash Point 140°F.

**EXTINGUISHING MEDIA:**  
Dry chemical, foam, Carbon Dioxide.

**FIRE FIGHTING PROCEDURES:**  
Wear SCBA and protective clothing. Shut off sources of ignition. Water fog or spray may be used to cool fire-exposed containers. If possible, allow fire to burn until gas flow is shut off. Wear SCBA and protective clothing. Stop flow of spray by releasing nozzle. The smoke produced is not flammable.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**  
Vapors may travel back to source of ignition and flash back. Cylinders exposed to intense heat or flame may burst explosively.

**HAZARDOUS COMBUSTION PRODUCTS:**  
Carbon Dioxide, Carbon Monoxide.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**  
Shut off sources of ignition. Wear safety gear. Contain spill with inert material and take up with inert, non-combustible absorbent. Use non-sparking scoop or shovel.

## SECTION 7 - HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**  
Do not rupture or incinerate containers. Avoid contact with and inhalation of vapors. Storage Method: Keep in a cool location away from all sources of ignition.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH		OSHA	
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TLV/TWA ppm	TWA mg/m3	PEL ppm	PEL mg/m3
<b>Isobutane</b>	<b>800</b>				<b>800</b>		<b>800</b>	
<b>Liquid hydrocarbons oil</b>		<b>5</b>		<b>2500 IDLH</b>		<b>5</b>		<b>5</b>
<b>Propane</b>	<b>1000</b>				<b>1000</b>		<b>1000</b>	

### PERSONAL PROTECTION

**RESPIRATORY PROTECTION:**  
Use a NIOSH/MSA or European EN-149 approved vapor or organic gas respirator if levels exceed exposure limits.

**PROTECTIVE GLOVES:**  
Impervious. Nitrile or neoprene gloves, if extended exposure is anticipated.

**EYE PROTECTION:**  
Safety glasses with side shields or chemical goggles.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**  
None.

**WORK / HYGIENIC PRACTICES:**  
Wash after handling.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE AND ODOR</b> Clear, colorless gas with no odor unless odorant has been added.	<b>VAPOR PRESSURE</b> 1206 mmHg.
VOC <b>100%</b> Volatility <b>100%</b>	<b>SPECIFIC GRAVITY (WATER = 1)</b> 0.35
<b>BOILING POINT / BOILING RANGE</b> 44.8°F	<b>SOLUBILITY IN WATER</b> Insoluble
<b>FLASH POINT</b> 140°F	<b>VISCOSITY</b> NA
<b>FLAMMABLE LIMITS</b> LEL: 1.9                      UEL: 9.5	<b>VAPOR DENSITY (AIR = 1)</b> 1.7
<b>AUTO-IGNITION TEMPERATURE</b> NR	<b>EVAPORATION RATE BUTYL ACETATE = 1)</b> 1.4

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## SECTION 10 - STABILITY AND REACTIVITY

**STABILITY**                      STABLE                      **X**                      **CONDITIONS TO AVOID:**  
 Heat, sparks, open flames, other sources of ignition.

**INCOMPATIBILITY (MATERIALS TO AVOID):**  
 Oxygen, oxidizers, halogens.

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS:**  
 Carbon Monoxide, Carbon Dioxide.

**HAZARDOUS POLYMERIZATION:**                      **CONDITIONS TO AVOID:**  
 Will not occur.                      None related to polymerization.

## SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Isobutane	75-28-5	NE	Inhalation ,mouse : LC50= 680,000 mg/m <sup>3</sup> /2 hours.
	200-857-2		
Liquid hydrocarbons oil	8012-95-1	Oral, mouse: LD50 = 22 gm/kg Oral, rat: LD50 = >24 gm/kg	Inhalation, rat: LC50 = 2062 ppm/4H
	232-384-2		
Propane	74-98-6	NE	Inhalation, mouse: LC 50= 680,000 mg/m <sup>3</sup> /2 hours
	200-827-9		

## SECTION 12 - ECOLOGICAL INFORMATION


No specific data is available. Do not release into sewers or waterways.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:**  
 In accordance with all local, state, and federal regulations. Do not discharge to watercourses.

## SECTION 14 - TRANSPORT INFORMATION

**PROPER SHIPPING NAME:**                      **Aerosols, Flammable**

DOT HAZARD CLASS / Pack Group: <b>2.1</b> REFERENCE: <b>49CFR</b> UN / NA IDENTIFICATION NUMBER: <b>UN 1950</b> LABEL: <b>Flammable Gas 2.1</b> HAZARD SYMBOLS: <div style="text-align: center; margin-top: 10px;">  </div>	IATA HAZARD CLASS / Pack Group: <b>2.1/Aerosol, Flammable</b> IMDG HAZARD CLASS: <b>2.1,Aerosol, Flammable</b> RID/ADR Dangerous Goods Code: <b>UN 2037, 2.1 ,PGII</b> UN TDG Class / Pack Group: <b>UN 1950/Aerosol Flammable</b> Hazard Identification Number (HIN): <b>20</b>
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Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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## SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act): <b>Listed.</b>	
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):	
Acute Health: <b>NO</b>	Chronic Health: <b>NO</b>
Fire: <b>YES</b>	Sudden Release of Pressure: <b>YES</b>
Reactive: <b>NO</b>	

<b>313 REPORTABLE INGREDIENTS: Not Listed.</b> CERCLA (USA - Comprehensive Response Compensation and Liability Act): California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:  State Right To Know: <b>Isobutane:MA,NJ,PA RI.; Paraffin Oils NJ,PA: Propane: MA, NJ, PA RI.</b> CCPR (Canadian Controlled Products Regulations): <b>Not Listed</b> CIDL (Canadian Ingredient Disclosure List): <b>Listed.</b> CDSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): EINECS (European Inventory of Existing Commercial Chemical Substances):	<b>No RQ's are Listed.</b> <b>WARNING! This product contains a chemical known to the State of California to cause cancer. Paraffin oils</b>  <b>Listed on CDSL.</b> <b>Referenced.</b>
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WGK Water Quality Index: **0**

RISK PHRASES:	SYMBOL(S) REQUIRED FOR EU LABEL	SAFETY PHRASES:
R11: Flammable.	 <b>F+ - Flammable</b>	<b>S2: Keep out of the reach of children.</b> <b>S9: Keep container in a well-ventilated place.</b> <b>S16: Keep away from sources of ignition - No smoking.</b> <b>S33: Take precautionary measures against static discharges.</b>

## SECTION 16 - OTHER INFORMATION

<b>Legend:</b>			
N/A = Not Applicable	N/D = Not Determined	N/E = Not Established	N/R = Not Reported
HMIS HAZARD RATINGS	HEALTH: FLAMMABILITY: PHYSICAL HAZARD: PERSONAL PROTECTIVE EQUIPMENT:	<b>0</b> <b>3</b> <b>0</b> <b>B</b>	0 = INSIGNIFICANT 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME

REVISION SUMMARY:  
Revised to EU protocols 8/1/2011, supersedes 10/01/2008 issue. JTV

<b>MSDS Prepared by:</b> ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com	
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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.