

## Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

Printing date: March 10, 2015

Revision: March 10, 2015

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Pepper Fog Smoke Formulation
- **Article number:** 4040, 4041
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Safariland, LLC  
13386 International Parkway  
Jacksonville, FL 32218  
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924, +1 (813)248-0585


### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Acute Tox. 4 H332 Harmful if inhaled.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xn; Harmful

R20: Harmful by inhalation.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**

cyclohexanone

- **Hazard statements**

H332 Harmful if inhaled.

- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

- **Hazard description:**

- **WHMIS-symbols:** Not hazardous under WHMIS.

- **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 1

Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

None of the ingredients are listed.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

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CAS: 108-94-1 EINECS: 203-631-1 Index number: 606-010-00-7	cyclohexanone	<div style="text-align: right;">(Contd. of page 2)</div>  Xn R20 R10  Flam. Liq. 3, H226  Acute Tox. 4, H332	25-50%
• <b>Additional information:</b> For the wording of the listed risk phrases refer to section 16.			

## SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air; consult doctor in case of complaints.  
Provide oxygen treatment if affected person has difficulty breathing.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After skin contact:**  
Clean with water and soap.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Coughing  
Breathing difficulty  
Gastric or intestinal disorders.
- **Hazards**  
Harmful if inhaled.  
May be harmful in contact with skin.  
May be harmful if swallowed.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
If necessary oxygen respiration treatment.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Foam  
Alcohol resistant foam  
Fire-extinguishing powder  
Carbon dioxide  
Gaseous extinguishing agents
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** Use large quantities of foam as it is partially destroyed by the product.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

<b>108-94-1 cyclohexanone</b>
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IOELV (EU)	Short-term value: 81,6 mg/m <sup>3</sup> , 20 ppm Long-term value: 40,8 mg/m <sup>3</sup> , 10 ppm Skin
PEL (USA)	Long-term value: 200 mg/m <sup>3</sup> , 50 ppm
REL (USA)	Long-term value: 100 mg/m <sup>3</sup> , 25 ppm Skin
TLV (USA)	Long-term value: 50 mg/m <sup>3</sup> , 20 ppm Skin
EL (Canada)	Short-term value: 50 ppm Long-term value: 20 ppm Skin
EV (Canada)	Short-term value: 50 ppm Long-term value: 20 ppm Skin

- **DNELs** No further relevant information available.

- **PNECs** No further relevant information available.

- **Ingredients with biological limit values:**

<b>108-94-1 cyclohexanone</b>
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BEI (USA)	80 mg/L Medium: urine Time: end of shift at end of workweek Parameter: 1,2-Cyclohexanediol with hydrolysis (nonspecific, semi-quantitative)
	8 mg/L Medium: urine Time: end of shift Parameter: Cyclohexanol with hydrolysis (nonspecific, semi-quantitative)

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

- **Respiratory protection:**

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

- **Protection of hands:**

Wear protective gloves to handle contents of damaged or leaking units.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:**

Not required under normal conditions of use.  
Protection may be required for spills.

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.  
No further relevant information available.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Liquid

**Colour:** Clear

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

**Melting point/Melting range:** Not Determined.

**Boiling point/Boiling range:** >302 °F / >150 °C (>576 °F / >302 °F)

- **Flash point:** 302 °F / 150 °C (576 °F / 302 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Auto/Self-ignition temperature:** >500 °F / >260 °C (>932 °F / >500 °F)

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not self-igniting.

- **Danger of explosion:** Product does not present an explosion hazard.

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- **Explosion limits:**
  - Lower:** 1,3 Vol %
  - Upper:** 9,4 Vol %
- **Vapour pressure at 20 °C (68 °F):** 5 hPa (4 mm Hg)
- **Density at 20 °C (68 °F):** 0,91 g/cm<sup>3</sup> (7,594 lbs/gal)
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
- **VOC content:** 50,0 %
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.  
Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

**108-94-1 cyclohexanone**

Oral	LD50	1535 mg/kg (rat)
Dermal	LD50	948 mg/kg (rabbit)
Inhalative	LC50/4h	8000 mg/l (rat)

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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitisation:** No sensitising effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
- **Acute effects (acute toxicity, irritation and corrosivity):**  
Harmful if inhaled.  
May be harmful if swallowed.  
May be harmful in contact with skin.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated

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- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· DOT, ADR, ADN, IMDG, IATA</li> <li>· 14.3 Transport hazard class(es)</li> <li>· DOT, ADR, ADN, IMDG, IATA</li> <li>· Class</li> <li>· 14.4 Packing group</li> <li>· DOT, ADR, IMDG, IATA</li> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> <li>· 14.6 Special precautions for user</li> <li>· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> <li>· UN "Model Regulation":</li> </ul> | <ul style="list-style-type: none"> <li>Not Regulated</li> <li>Not Regulated</li> <li>Not Regulated</li> <li>No</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>-</li> </ul> |
|---|--|

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

<b>· Section 355 (extremely hazardous substances):</b>
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None of the ingredients are listed.
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<b>· Section 313 (Specific toxic chemical listings):</b>
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None of the ingredients are listed.
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<b>· TSCA (Toxic Substances Control Act):</b>
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All ingredients are listed.
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<b>· Proposition 65 (California):</b>
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<b>· Chemicals known to cause cancer:</b>
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None of the ingredients is listed.
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<b>· Chemicals known to cause reproductive toxicity for females:</b>
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None of the ingredients are listed.
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<b>· Chemicals known to cause reproductive toxicity for males:</b>
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None of the ingredients are listed.
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<b>· Chemicals known to cause developmental toxicity:</b>
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None of the ingredients are listed.
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<b>· Carcinogenic Categories</b>
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<b>· EPA (Environmental Protection Agency)</b>
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None of the ingredients are listed.
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<b>· IARC (International Agency for Research on Cancer)</b>
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108-94-1   cyclohexanone
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<b>· TLV (Threshold Limit Value established by ACGIH)</b>	
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108-94-1	cyclohexanone	A3
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<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
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None of the ingredients are listed.
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<b>· Canada</b>
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<b>· Canadian Domestic Substances List (DSL)</b>	
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All ingredients are listed.
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<b>· Canadian Ingredient Disclosure list (limit 0.1%)</b>	
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108-94-1	cyclohexanone
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<b>· Canadian Ingredient Disclosure list (limit 1%)</b>	
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None of the ingredients are listed.
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<b>· Other regulations, limitations and prohibitive regulations</b>	
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<b>· Substances of very high concern (SVHC) according to REACH, Article 57</b>	
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None of the ingredients are listed.
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<b>· 15.2 Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.
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### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant phrases**

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

R10 Flammable.

R20 Harmful by inhalation.

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

**· Sources**

SDS Prepared by:

ChemTel Inc.

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