

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200) and WHMIS 2015 regulations

Printing date: September 08, 2016

Revision: September 08, 2016

1 Identification

- **Product identifier**
- **Trade name:** First Defense® Inert MK-4 Cone Aerosol
- **Product code:** 5149F (1012562)
- **Recommended use and restriction on use**
- **Recommended use:** Q^! Air training } ã
- **Restrictions on use:** Contact manufacturer
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Information department:** Customer Care Department
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Aerosol 2 H223 Flammable aerosol.
Press. Gas H280 Contains gas under pressure; may explode if heated.
Eye Irrit. 2B H320 Causes eye irritation.
- **Additional information:**
0 % of the mixture consists of component(s) of unknown toxicity.
There are no other hazards not otherwise classified that have been identified.

Label elements

- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS02 GHS04

- **Signal word:** Warning
- **Hazard statements:**
H223 Flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H320 Causes eye irritation.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.
P211 Do not spray on an open flame or other ignition source.
P264 Wash thoroughly after handling.

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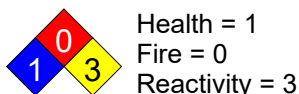
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P280 Wear eye protection.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 P403 Store in a well-ventilated place.

· **Additional information:** Pressurized container: May burst if heated.

· **Classification system**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 3

· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	3	Reactivity = 3

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

811-97-2	Norflurane	⚠ Press. Gas, H280 Simple Asphyxiant	40-60%
64-17-5	ethanol	⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319	20-40%

· **Additional information:**

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Rinse with warm water.

If skin irritation is experienced, 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:**

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

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- **Most important symptoms and effects, both acute and delayed:**
 - Headache
 - Dizziness
 - Nausea
 - Cramp
 - Thirst
 - Disorientation
- **Danger:**
 - Causes eye irritation.
 - Condition may deteriorate with alcohol consumption.
- **Indication of any immediate medical attention and special treatment needed:**
 - May produce a narcotic effect.
 - If medical advice is needed, have product container or label at hand.
 - If necessary oxygen respiration treatment.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**
 - Flammable aerosol.
 - In case of fire, the following can be released:
 - Carbon monoxide (CO)
 - Danger of receptacles bursting because of high vapor pressure if heated.
- **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.

6 Accidental release measures

- **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.
 - Ensure adequate ventilation.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Dispose contaminated material as waste according to item 13.
 - Send for recovery or disposal in suitable receptacles.
- **Reference to other sections:**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
- **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

811-97-2 Norflurane

WEEL (USA)	Long-term value: 1000 ppm
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64-17-5 ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1.900 mg/m ³ , 1.000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm
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- **Exposure controls**
- **Engineering measures** Provide adequate ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
No relevant information available.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Engineering controls:** No relevant information available.
- **Breathing equipment:**
Not required under normal conditions of use.

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For spills, respiratory protection may be advisable.

Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**

Not required under normal conditions of use.

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

· **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.

· **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Neoprene gloves

Nitrile rubber, NBR

Natural rubber, NR

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protection may be required for spills.

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

No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

Form: Aerosol

Color: Colorless

· **Odor:** Alcohol-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.

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

· **Auto-ignition temperature:** >260 °C (>500 °F) (Estimate)

· **Decomposition temperature:** Not determined.

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

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· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density at 20 °C (68 °F):	0.9-1.1 g/cm ³ (7.511-9.18 lbs/gal) (Estimate)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:**
Flammable aerosol.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- **Conditions to avoid:** No relevant information available.
- **Incompatible materials:** No relevant information available.
- **Hazardous decomposition products:** Possible in traces.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Slight irritant effect on skin and mucous membranes.
- **On the eye:** Causes eye irritation.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

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· **IARC (International Agency for Research on Cancer):**

64-17-5 ethanol

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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Inhalation.

Skin contact.

Eye contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** Causes eye irritation.

· **Repeated dose toxicity:** From product as supplied: None.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

Generally not hazardous for water

This statement was deduced from the properties of the single components.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Smaller quantities can be disposed of with household waste.

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.

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- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1950

- **UN proper shipping name**
- **DOT** Aerosols, flammable
- **ADR, IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable

- **Transport hazard class(es)**

- **DOT**



- **Class** 2.1
- **Label** 2.1

- **ADR**



- **Class** 2 5F Gases
- **Label** 2.1

- **IMDG, IATA**



- **Class** 2.1
- **Label** 2.1

- **Packing group** This UN-number is not assigned a packing group.
Aerosols are not assigned a packing group.

- **Environmental hazards**

- **Marine pollutant:** No

- **Special precautions for user** Warning: Gases
- **EMS Number:** F-D,S-U

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|--|---|
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · DOT | |
| · Quantity limitations | On passenger aircraft/rail: 75 kg
On cargo aircraft only: 150 kg |
| <hr style="border-top: 1px dashed black;"/> | |
| · ADR | |
| · Excepted quantities (EQ) | Code: E0
Not permitted as Excepted Quantity |
| <hr style="border-top: 1px dashed black;"/> | |
| · IMDG | |
| · Excepted quantities (EQ) | Code: E0
Not permitted as Excepted Quantity |

15 Regulatory information

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

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· Proposition 65 (California)

· Chemicals known to cause cancer:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	ethanol
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· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	ethanol
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

64-17-5	ethanol	1
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· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Date of preparation / last revision** 09/08/2016 / -

· **Abbreviations and acronyms:**

ADR: 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

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

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

LDLo: Lowest Lethal Dose Observed

Flam. Aerosol 2: Aerosols – Category 2

Press. Gas: Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

· **Sources**

SDS Prepared by:

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