Material Safety Data Sheet (MSDS)

Bear Beware Plus Bear Deterrent

SECTION I - Product Name/Company Identification

Product Name: Bear Beware Plus Bear Deterrent
Product Use: Aerosol attack deterrent product
Company Identification:

Company Name:	Parkland Aero-Fillers
Address:	P.O. Box 3697
	Spruce Grove, Alberta, Canada T7X 3A9
Fax Number:	(780) 962-1024

24 Hour EMERGENCY Number: (613) 996-6666

Date Revised: January 2011

SECTION II - Active Ingredients/Composition

Active Components: Capsaicin CAS # 404-86-4
Common Name: Oleoresin Capsicum, extract of cayenne pepper
Certified level: 0.98% w/w Capsaicin
Propellant/solvent system: A proprietary combination of HFC 134a, a non-ozone depleting propellant in addition to pharmaceutical/cosmetic grade hydrocarbon solvents containing integral and appendant oxygen.

SECTION III - Physical Data/Chemical Properties

Boiling Point:	-26° C	Percent Volatile: 90%	
Vapour Pressure:	81 psig at 24° C	Appearance: clear, red / brown liquid	
Specific Gravity:	1.01	Colour: reddish-brown	
Solubility in water:	16.97%	Odour: pungent	
Evaporation Rate:	Greater than 1, (CCl_4 = 1)		

SECTION IV - Fire and Explosion Hazard Data

Extinguishing Media - Carbon dioxide, alcohol resistant foam or dry chemical.
Special Fire Fighting Instructions - Use self-contained breathing apparatus (SCBA) and full protective clothing.
Unusual Fire and Explosion Hazards - Canisters may burst if exposed to temperatures that exceed 54°C.

SECTION V - Stability and Reactivity Data

Chemical Stability:
Stable X
Unstable _____
Incompatible/Materials to Avoid: Strong oxidizing agents, organic anhydrides, sodium.
Hazardous Decomposition Products: May be formed when exposed to extreme heat or flame.
Hazardous Polymerization Products:
Will occur _____
Will not occur X

SECTION VI - Toxicological Information / Exposure Guidelines

ROUTE OF EXPOSURE:
Skin contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Lachrymator. Causes severe eye irritation.
Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: Toxic if swallowed.

SENSITIZATION – May cause allergic reaction

TARGET ORGAN(S) OR SYSTEM(S) – Nerves

SIGNS AND SYMPTOMS OF EXPOSURE – May include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CONDITIONS AGGRAVATED BY EXPOSURE – Causes sneezing. Do not inhale.

TOXICITY DATA

Intraperitoneal	Rat	9500 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Oral	Mouse	47.2 mg/kg	LD50
Skin	Mouse	>512 mg/kg	LD50
Intraperitoneal	Mouse	6500 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Subcutaneous	Mouse	9000 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Intravenous	Mouse	400 ug/kg	LD50
Intramuscular	Mouse	7800 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Intratracheal	Mouse	1600 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Rectal	Mouse	>218 mg/kg	LD50
Intraperitoneal	Rabbit	>50 mg/kg	LD50
Intraperitoneal	Guinea pig	1100 ug/kg	LD50

Remarks: Behavioural: convulsions or effect on seizure threshold; Excitement; Muscle contraction or spasticity

Intraperitoneal	Hamster	>120 mg/kg	LD50

CHRONIC EXPOSURE – CARCINOGEN

Route	Species	Dose	ExposureTime	Frequency
Oral	Mouse	3318 mg/kg	5W	C

Result: Tumourigenic: Equivocal tumourigenic agent by RTECS criteria.
Gastrointestinal: Tumours

CHRONIC EXPOSURE – MUTAGEN

Intraperitoneal Mouse 7500 ug/kg
Mutation Test: micronucleus test

Intraperitoneal Mouse 1800 ug/kg
Mutation Test: DNA inhibition

Intraperitoneal Mouse 93120 ug/kg 32D
Mutation Test: sister chromatid exchange

Hamster 5 mg/l (+S9)
Cell Type: Lung
Mutation Test: Mutation in microorganisms

Exposure Guidelines:

PEL - 1000 ppm	TLV - 1000 ppm	8 Hr. TWA
LEL - 9.33	UEL - 14.2	
STEL - 1000 ppm	WEEL - 1000 ppm	

SECTION VII - First Aid Measures

INHALATION:

If high concentrations are inhaled, immediately remove subject to fresh air. Keep person calm. If not breathing, begin artificial respiration. If breathing is difficult, administer oxygen. Symptoms may include: coughing, sneezing, nausea and vomiting.

SKIN CONTACT:

In case of contact, wash skin with soap and water to prevent further exposure. Flush skin with copious amounts of cool water to minimize irritant effect. Wash contaminated clothing before reuse. Do not apply salves or dressing to affected areas.

EYE CONTACT:

Remove contact lenses and flush eyes with copious quantities of cool water. Move patient to fresh air as soon as possible.

INGESTION:

Although indigestion is unlikely and not considered a potential route of exposure, patients should be treated as an acute upper airway burn by an appropriate specialist. Do not induce vomiting.

Delayed Effects - Rubefacient effects usually subside within 30 minutes. Cool water or cool circulating air will minimize discomfort.

Advice to Physician/Special considerations - Inhalation may aggravate or initiate asthmatic episodes. Pre-existing skin disorders may be aggravated by exposure to this material.

SECTION VIII - Accidental Release/Disposal Considerations

Steps to be taken in case material is accidentally released:

Respiratory protection - NIOSHA approved respirator.
Ventilation - Mechanical ventilation to keep exposure below recommended limits.
Protective gloves - Rubber, PVA, or neoprene.
Eye protection - Safety goggles or face shield.
Skin protection - Use appropriate solvent resistant barrier clothing.
Other protective clothing or equipment - Use rubber apron if convenient for operation.

Waste Disposal Measures: Not considered a hazardous waste.

Additional Recommendations: Eliminate all sources of ignition, contain spilled material with inert absorbers.

SECTION IX - Precautions for Safe Handling and Use

Precautions to be taken in storage and handling: Do not store containers in direct sunlight, in automobiles or areas which may exceed 50° C.
Proper disposal of containers: Reduce pressure to zero and dispose of in municipal waste in accordance with Federal, State, Provincial or Local regulations or offer for recycling if appropriate for area.
Other precautions: Do not puncture or incinerate empty cans. The spray should not be used at close range directed toward sparks or flames.

SECTION X - Transportation Information

DOT Classification - ORM-D, consumer commodity
Shipping Name - Aerosols, Flammable
Hazard Class - 2.1, UN1950, Label Codes 2.1

SECTION XI - Environmental Impact

Ozone Depleting Potential (ODP): This material has no ozone depleting potential. The mentioned products do not contain methylene chloride (methyl chloroform), trichloroethane, trichlorethylene or any other chlorinated solvents or propellants that have been shown to cause cancer in laboratory animals or deleterious effects on atmospheric ozone.