SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET

Last changed: 13/09/2011 Internal No: Replaces date:

BODYGUARD PERSONLARM

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier: BODYGUARD PERSONLARM

Internal article no: 36-4568

1.2. Relevant identified uses of the substance or mixture and uses advised against

Type of use: Personal alarm

Uses advised against:
The product may not be used in a different way than the intended use

1.3. Details of the supplier of the safety data sheet

National manufacturer/importer

Enterprise	Clas Ohlson AB
Address	
Postal code	792 85 Insjön
Country	
E-mail	info@clasohlson.se
Internet	www.clasohlson.uk
Telephone	
Fax	

Name	E-mail	Tel. (work)	Country

1.4. Emergency telephone number

Emergency Phone	Type of assistance	Opening Hours
112		

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

-

General
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 ºC. Do not pierce or burn, even after use.

Health
Rapid evaporation of the liquid may cause frostbite. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Fire and explosion
Extremely flammable.Pressure chamber may explode in the event of fire.

Environment
Not classified

2.2. Label elements

R-phrases

Nr.	R-Phrase text
-	-

S-phrases
S2 Keep out of the reach of children.
S51 Use only in well-ventilated areas.
S23 Do not breathe spray.

Other Labelling phrases
CAUTION. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. 0 % by mass of the contents are flammable.

Safety data sheet available for professional user on request.

2.3. Other hazards

PBT-substance ☐**Yes** ☒**No**
vPvB-substance ☐**Yes** ☒**No**

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

No	Ingredient name	Reg No	EG no	CAS no	Conc.	Classification
1	1,1,1,2-Tetrafluoroethane	01-21194593 74-33	212-377-0	811-97-2	100 %	-

Ingredients comments
R-phrases mentioned in section 3 are listed up in section 16 with complete text.

4. FIRST AID MEASURES ☐

4.1. Description of first aid measures

General
Get medical attention if any discomfort continues.Show this safety data sheet, if possible.

Inhalation
Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary.

Skin contact
Take off all contaminated clothing immediately. Do not use hot water. If frostbite has occurred, call a physician.

Eye contact
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion
Drink a few glasses of water or milk.Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation
Shortness of breath, dizziness, weakness, nausea, headache, narcosis, irregular cardiac activity.

Skin contact
May cause frostbite. Protracted or repeated exposure may cause drying and cracking of the skin.

Eye contact
Irritant of eyes and mucous membranes.

Ingestion
Ingestion may cause: Smarting in mouth and throat. Stomach pain. Nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed
Not applicable

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards
Pressurized container: Must not be exposed for temperatures above 50 ºC. Pressure chamber may explode in the event of fire.

5.3. Advice for firefighters

Protective equipment for firefighters
Gases that are dangerous to health are formed in a fire. Avoid breathing fire vapours. Firemen must wear closed-circuit breathing equipment and full protective suits. Wear air supplied respiratory protection.

Other information
Containers close to fire should be removed immediately or cooled with water. Do not allow extinguishing water or spillage to run out into the sewage system.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions
Must not be discharged into the sewage system.

6.3. Methods and material for containment and cleaning up
Evaporates.

6.4. Reference to other sections
Protective equipment, see section 8

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Aerosols can explode when heated to temperatures over 50 °C.
Keep out of the reach of children. Do not spray on a naked flame or any incandescent material. Do not pierce or burn, even after use. Observe normal care. Avoid all unnecessary contact with chemicals.

7.2. Conditions for safe storage, including any incompatibilities
Pressurized container: Must not be exposed for temperatures above 50 °C. Not to be stored in direct sunlight.Keep in a dry, cool and well-ventilated place.

7.3. Specific end use(s)
exposure scenario(s): ☐Yes (annex to the safe datasheet) ☒No

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ingredient name	CAS no.	Range	ppm	mg/m³	Year	Not
1,1,1,2-Tetrafluoroethane	811-97-2	8 h	500	2000	1996	
1,1,1,2-Tetrafluoroethane	811-97-2	15 min	750	3000	1996	

The OEL values are based on the Swedish regulation, AFS 2005:17 Occupational exposure limit values and measures against air contaminants.

Derived No Effect Level
1,1,1,2-Tetrafluoroethane :

Type of Application (Use): Workers
Exposure routes: Inhalation
Health Effect: Chronic effects, Systemic toxicity
Value: 13 936 mg/m3
Type of Application (Use): Consumers
Exposure routes: Inhalation
Health Effect: Chronic effects, Systemic toxicity
Value: 2 476 mg/m3

Predicted No Effect Concentration
1,1,1,2-Tetrafluoroethane :

Value: 0,1 mg/l
Compartment: Fresh water

Value: 0,01 mg/l
Compartment: Marine water

Value: 1 mg/l
Compartment: Water
Remarks: Intermittent use/release

Value: 0,75 mg/kg
Compartment: Fresh water sediment

8.2. Exposure controls

Recommended protective equipment

Exposure control
Use only in well-ventilated areas.All handling to take place in well ventilated area.Provide eyewash, quick drench.Wash your hands thoroughly after handling and before eating or smoking.

Respiratory protection
No respirator is normally needed.

Eye protection
Eye protection is normally not needed.

Hand protection
Hand protection is normally not needed.

Protective clothing
Protective clothing is normally not needed.

Environmental exposure controls
-

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Parameter	Value	Method
Appearance:	Aerosol, colourless	
Odour:	Ether like	
Odour threshold;	Not specified	
pH:	Not specified	
Melting point/freezing point; Initial boiling point and boiling range;	-101-103 °C at 1013 hPa	
Flash point;	-26,5 °C at 1013 hPa	
Evaporation rate;	Not specified	
Flammability (solid, gas);	Non-flammable	
Upper/lower flammability or explosive limits;	Not specified	
Vapour pressure;	6661 hPa at 25 °C	
Vapour density;	0,0042 g/cm3 at 25 °C	
Relative density;	Not specified	
Solubility(ies);	1,5 g/l i vatten at 25 °C vid 1013 hPa	
Partition coefficient: n-octanol/water;	Not specified	
Auto-ignition temperature;	Not specified	
Decomposition temperature;	Not specified	
Viscosity;	Not specified	
Explosive properties;	Not explosive	
Oxidising properties.	Not oxidizing	

9.2 Other information

Parameter	Value
VOC	Not specified

10. STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reactions known.

10.2 Chemical stability
Stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
Avoid high temperatures and direct sunlight.

10.5 Incompatible materials
No dangerous reactions known.

10.6 Hazardous decomposition products
No dangerous reactions known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

· 1,1,1,2-Tetrafluoroethane
not applicable

Acute inhalation toxicity

· 1,1,1,2-Tetrafluoroethane
LC50 / rat :567 000 ppm

/ dog
Cardiac sensitization

Acute dermal toxicity

· 1,1,1,2-Tetrafluoroethane
not applicable

Skin irritation

· 1,1,1,2-Tetrafluoroethane
rabbit
Classification: Not classified as irritant
Result: slight irritation
Not expected to cause skin irritation based on expert review of the properties of the substance.

human
Classification: Not classified as irritant.
Result: No skin irritation

Eye irritation
· 1,1,1,2-Tetrafluoroethane
rabbit
Classification: Not classified as irritant
Result: slight irritation
Not expected to cause eye irritation based on expert review of the properties of the substance.

human
Classification: Not classified as irritant
Result: No eye irritation

Sensitisation

· 1,1,1,2-Tetrafluoroethane
guinea pig
Classification: Not a skin sensitizer.
Result: Did not cause sensitization on laboratory animals.
Not expected to cause sensitization based on expert review of the properties of the substance.

Did not cause sensitization on laboratory animals. There are no reports of human respiratory sensitization.

Repeated dose toxicity

· 1,1,1,2-Tetrafluoroethane
Inhalation rat
No toxicologically significant effects were found.

Mutagenicity assessment

· 1,1,1,2-Tetrafluoroethane
Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity assessment

· 1,1,1,2-Tetrafluoroethane
Not classifiable as a human carcinogen.

Toxicity to reproduction assessment

· 1,1,1,2-Tetrafluoroethane
No toxicity to reproduction
Human experience
Excessive exposures may affect human health, as follows:

Inhalation
Severe shortness of breath, narcosis, Irregular cardiac activity

Further information
May cause cardiac arrhythmia. Rapid evaporation of the liquid may cause frostbite. Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema).

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

· 1,1,1,2-Tetrafluoroethane
LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): 450 mg/l

Toxicity to aquatic plants

· 1,1,1,2-Tetrafluoroethane
EC50 / 72 h / Algae: > 118 mg/l
Information given is based on data obtained from similar substances.

Toxicity to aquatic invertebrates

· 1,1,1,2-Tetrafluoroethane
EC50 / 48 h / Daphnia magna (Water flea): 980 mg/l

12.2 Persistence and degradability

Biodegradability

/ 28 d
Biodegradation: 3 %
Method: Closed Bottle test
Not readily biodegradable.

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). / This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Ozone depletion potential
0

Global warming potential (GWP)
1300

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

General
The company is member of REPA.

Empty packaging is sent for recycling. Spillages and not empty containers are treated as dangerous waste. Observe local regulations.

Waste management
Wear necessary protective equipment, see section 8. Must not be discharged into the sewage system

Category of waste
Waste code 14 06 03*
Empty containers; waste code 15 01 04

14. TRANSPORT INFORMATION ☐

Classified as Dangerous Goods: ☒ Yes ☐ No ☐ Not assessed

14.1 UN number
1950

14.2 UN proper shipping name
ADR (land): AEROSOLS
IMDG (sjö): AEROSOLS (Proper shipping name)
IATA (flyg): AEROSOLS

14.3 Transport hazard class(es)

ADR/RID
Class: 2,5A
Danger form: 2.2

IMDG
Class: 2.2

IATA
Class: 2.2
Label 2.2

14.4 Packing group
ADR/RID: -
IMDG: -
IATA: -

14.5 Environmental hazards
IMDG, marine pollutant: No

14.6 Special precautions for user
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Other information
Aerosols may be carried by land (ADR) as limited quantities (LQ 2) as long as each package does not exceed 30 kg in cardboard boxes or 20 kg on trays with shrink- or stretch wrapping. Each package shall be marked with "UN 1950". These markings shall be displayed within a diamond-shaped area surrounded by a line that measures at least 100 mm x 100 mm.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical safety assessment
No

16. OTHER INFORMATION

List of relevant R-phrases

Nr.	R-Phrase text
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TRAINING ADVICE
The information in this MSDS shall be available to those who handle the product.

Version	Rev. date	Responsible	Changes
001	2011-09-13	J. Mattsson	-