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Guardian Angel I & II / Pepper Blaster I & II

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Material Safety Information Sheets

Effective Date April 1, 2010

1 Product Identification / Manufacturer / Contact Information

1.1 Product Identification :

Brand Name : Guardian Angel I & II Jet Protector / Pepper Blaster I & II
Product Use : Self Defence
Chemical Composition: Oleoresin extract of Capsicum Pepper in solution of Benzyl Alcohol
Formula : 2 x 6 ml (= 12 grams) liquid irritant
IATA / ICAO Hazard Classification: None
Packaging: Tin box

1.2 Supplier/Manufacturer:

Piexon AG
Buetzbergstrasse 1
CH-4912 Aarwangen, Switzerland

1.3 Contact Number:

+41 62 919 91 00

Emergency Telephone Number: +41 62 919 91 00

When Calling from USA 011 41 62 919 91 00

2 Composition and Information on Ingredients

2.1 General Description

Self Defence device using Oleoresin Capsicum (OC) as the irritant

2.2 Ingredients

Material	CAS	%	HAZARD
Benzyl Alcohol	01005-51-6	90	Flammable
Capsaicine	404-86-4	2.50%	Irritant-Inflammatory
Natural waxes and resins	-	7.50%	none

2.3 Physical Data

Boiling point	205°C	Freezing Point	-22°C
Specific gravity (H2O = 1)	1.036g/cm3	Melting Point	-22°C
Vapor density (air = 1)	3.72	Vapor pressure at 20°C	0.05 mbar
Per cent volatiles per volume	92%	Solubility in water	3.6 g/l
Appearance and Odor	Light amber red liquid with pungent aroma		

3 Possible Dangers

3.1 Nature of Danger

Low risk. Isolated explosions if fire is of extended duration. The trajectory range of the parts that are flung around is small.

Possible risk for bodies of water and sewage treatment plants.

4 Health Hazard

4.1 Acute Effects of Overexposure to Irritant

Avoid contact with irritant liquid. Avoid accidental contact with eyes, skin or mucuos membranes

Ingestion	Burning sensation of throat, and may cause nausea, stomach pain and vomiting.
Skin absorption	Not readily absorbed through the skin.
Inhalation	Cough, gagging and shortness of breath. Burning sensation of the nose, mouth and the throat.
Skin contact	Immediate inflammation of mucuos membranes, burning sensation and redness of the skin may occur.
Eye contact	Burning sensation and irritation. Immediate closing of the eyes.
Chronic effects of overexposure	No evidence of adverse effects from available information.

4.2 Emergency and First Aid Measures

Ingestion	In the event of accidental swallowing, ingest water and get medical attention promptly.
Skin	Remove contaminated clothes. Flush affected area thoroughly with cool water to relieve all symptoms.
Inhalation	Remove subject into fresh air.
Eyes	Flush thoroughly with cool water for 15 minutes. Do not rub. Symptoms disappear in 45 minutes. If symptoms persist, get medical attention promptly.
Medical conditions aggravated by overexposure	Because of its irritating properties, this material may aggravate an existing dermatitis.

5 First Aid

5.1 Notes to Pysician	There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition, only after rinsing the affected area with clean water for up to 45 minutes.
5.2 Skin Exposure	If this product contaminates the skin, immediately begin decontamination with running water
5.3 Eye Exposure	If the irritant enters the eyes, wipe victims eyes with clean water

6 Fire and Explosion Hazard

6.1 Characteristics

Flash point Irritant	96°C
Ignition temperature irritant	435°C (self ignition)
Explosion limit in air, % by volume	1.30% lower; 13.00% upper
Suitable extinguishing media	Water spray, dry chemical powder, foam
Unsuitable extinguishing media	Full water jet
Specific hazards	Emits irritant vapors under fire condition.
Special fire fighting procedures	Evacuate all personnel from affected area. Use self contained breathing apparatus and protective clothing.
Unusual fire and explosion hazards	Self ignition of the pyrotechnic power devices when heating up over 165°C. No danger of mass explosion and no fragmentation hazard.

6.2 Measures to be take In case of Fire

Stop the engine
 No naked lights. No smoking

Mark roads and warn other road users or passers-by
Inform the public about the hazard - Warn everyone
Inform police and fire brigade as soon as possible
Only extinguish initial fires
Do not extinguish any cargo fires
Suitable extinguisher : water

7 Handling & Storage

- 7.1** Store in a cool and dry place, away from sunlight
Store away from heat and flame
Handling, Transportation and Storage only in closed original Packaging
Do not open the original packaging. Store at room temperature
-
- 7.2** Steps to be taken if material is released
Avoid contact with eyes. Do not breath vapor. Absorb liquid irritant spillage onto inert material (eg. Sand) Residues may be washed away with water and detergent
-
- 7.3** Waste disposal method
Do not puncture or incinerate. Dispose any residue, or disposalbe device in accordance with local, state and federal regulations

8 Special Protection Information (For Industrial Use Only)

- 8.1 Respiratory protection**
Respiratory face mask required (Filter: Organic vapours and acid gas)
-
- 8.2 Ventilation**
Local exhaust or mechanical (general)
-
- 8.3 Protective Gloves**
Rubber or Plastic
-
- 8.4 Eye protection**
Goggles
-
- 8.5 Other protective equipment**
Eye bath, Safety shower
-

9 Physical and chemical properties:

- 9.1 General Information:**
- | | |
|---------|-------------------|
| Form : | liquid |
| Colour: | colourless, clear |
| Odour: | aromatic |
- 9.2 Change in condition:**
- | | |
|------------------------------|-------------------------|
| Melting point/Melting range: | -15°C (DIN 51761) |
| Boiling point/Boiling range: | 205°C (DIN 51761) |
| Flash point: | 94 - 101 °C (DIN 51755) |
| Ignition temperature: | 435°C |
| Decomposition temperature: | 870°C |
- 9.3 Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures is possible

9.4 Explosion limits:

Lower:	1.3 Vol %
Upper:	13 Vol %
Vapour pressure at 20°C	0.13 hPa
Density at 20°C	1.045 g/cm ³ (DIN 51757)

9.5 Solubility in / Miscibility with:

Water at 20°C 40 g/l

9.6 pH-value:

Refractive index (20°C) at 20°C: 1.537-1.543

Segregation coefficient (noctanol/water): 1.1 log POW

10 Stability and reactivity

10.1 Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat

10.2 Dangerous reactions:

Reacts with strong acids and oxidising agents

Photoreactive

10.3 Dangerous products of decomposition:

Thermal decomposition into organic fumes, which can form explosive mixtures with air

11 Toxicology Information

11.1 Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral LD50 1230 mg/kg (rat)

Dermal LD50 2000 mg/kg (rabbit)

Inhalative LC50/8h 1000 ppm (rat)

11.2 Primary irritant effect:

Sensitization : No sensitising effects known

11.3 Subacute to chronic toxicity:

Repeated and/or prolonged contact may cause serious skin damage

Repeated exposition can damage the heart

11.4 Additional toxicological information:

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

Danger through skin absorption

12 Ecological information

12.1 Information about elimination (persistence and degradability):

The product is easily biodegradable

12.2 Behaviour in environmental systems:

12.2 a Mobility and bioaccumulation potential:

Due to the distribution coefficient n-octanol/water an appreciable accumulation in organisms is not to be expected

12.3 Ecotoxicological effects:

12.3 a Aquatic toxicity:

EC50/24h 400 mg/l (Daphnia magna)

IC5/96h 640 mg/l (Scenedesmus quadricauda)

LC50/96h 10 mg/l (bluegill sunfish)

Remark: Harmful to water organisms

12.4 General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system

13 Disposal considerations

13.1 Product Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system
Recovery or recycling, if possible. In other cases product has to be disposed in an incinerator for hazardous waste

13.2 Uncleaned packagings, Recommendation:

Packaging can be reused or recycled after cleaning
Packagings that cannot be cleansed are to be disposed of in the same manner as the product

14 Transport Information

Land transport ADR/RID (cross border) : Non Dangerous/Hazmat

Maritime transport IMDG:Non Dangerous/Hazmat

Air Transport ICAO-TI and IATA-DGR : Non Dangerous/Hazmat

15 Regulations

15.1 Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on hazardous materials

15.2 Code letter and hazard designation of product:

Xn Harmful

15.3 Risk phrases:

20/21/22 Harmful by inhalation, in contact with skin and if swallowed

15.4 Safety phrases:

7 keep container tightly closed

16 keep away from sources of ignition - no smoking

24/25 Avoid contact with skin and eyes

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

28 After contact with skin, wash immediately with plenty of water

15.5 National regulations:

15.5 a Swiss Legislation:

BAGT-Nr./BAG-EDV-Nr. : G-1250

Class of toxicity : 4

Technical Instructions (air)

Class Share in %: II / 100.0

15.6 Water pollution class:

Water pollution class WGK 1 (classification, D): slightly hazardous to water

Water pollution class PN3 (classification, CH): slightly hazardous to water

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.