



BYRNA OC :DB :PG  
Version 1.1  
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COMPANY PROPRIETARY INFORMATION

## **Safety data sheet**

In accordance with Regulation (EC) No 1272/2008

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

#### **1.1. Product Identifier**

**Byrna Self Defense Pepper Spray**

**OC/DB/PG (Fogger)**

#### **1.2. Relevant identified uses of the substance or mixture**

**Use of the substance/mixture:** Self-defense Pepper Spray.

#### **1.3. Information on the supplier of the safety data sheet**

Company : Helvetia Defense  
Adress: Rte de compois 6, 1222 Vesenaz - SWITZERLAND  
Phone: +41 22 593 00 01  
E-mail : [alice.ose@heldef.ch](mailto:alice.ose@heldef.ch)  
Interlocuteur : Alice Ose  
Internet : <https://heldef.ch>

#### **1.4. Emergency call number**

Tox Info Suisse - Tél. 145 | 24h ([www.toxi.ch](http://www.toxi.ch))

### **SECTION 2: Hazard identification**

#### **2.1. Classification of the substance or mixture**

**Regulation (EC) No 1272/2008**

Hazard categories:

Aerosol: Aerosol 3

Skin irritation/corrosion: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

#### **2.2. Labelling elements**

**Regulation (EC) No 1272/2008**

**Disclaimer:**

**Hazard statements**

H335 May cause respiratory irritation.

H319 Causes severe eye irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H229 Pressurised container: May burst if heated.

H227 Combustible Liquid

H280 Contains pressurized gas; Can explode if heated

H315 Causes skin irritation

H319 Causes severe eye irritation

**Pictograms :**  
Warning



**Precautionary Statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P305+P351+P338	IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easily removable. Continue rinsing.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container to...

**2.3. Other hazards**

The substances contained in this mixture do not meet the criteria for PBT or vPvB classification.

**SECTION 3: Composition/Component information**

**3.1 Substances**

**Hazardous components**

No CAS	Substance	Quantity
	Classification according to Regulation (EC) No 1272/2008 (CLP)	
8023-77-6	Capsicum Oleoresin	4%
112-34-5	Diethylene Glycol Monobutyl Ether	Proprietary
29118-24-9	1-Propene, 1,3,3,3-Tetrafluoro-(1E)-	Proprietary

**Full text of H : see section 16**



## **SECTION 4: First aid measures**

### **4.1. Description**

#### **Oral exposure by Ingestion**

This is an unintended and unlikely potential route of exposure. In the event of ingestion, have patient rinse mouth with water. Never give anything by mouth to an unconscious person and do not induce vomiting.

Assume the victim will experience acute non-specific airway reaction because of the ingestion: seek medical attention or contact a poison control center. Consult a medical practitioner /doctor if feeling unwell.

#### **Skin exposure**

Remove any residual powder from the skin in a dry manner. Rinse the affected area with clean, cool water, and wash with a mild soap before rinsing the affected area again. Do not apply ointments or dressings to the affected areas. If an allergic reaction takes place or a burning sensation persists, consult a medical practitioner/doctor.

#### **Eye exposure**

Rinse out with the affected eye(s) using a large amount of clean water with the eyelid held wide open (15 minutes minimum). Consult a medical practitioner/doctor if eye irritation persists for an abnormal amount of time.

#### **Medium term effects**

The redness of exposed skin, eyes and stinging sensation normally subside after approximately half an hour. Using cool water to rinse off exposed areas and keeping the patient in a well-ventilated area exposed to cool air may further reduce symptoms.

#### **Specific considerations for medical practitioners**

Inhalation of this substance may aggravate/trigger acute episodes of existing respiratory conditions including chronic asthma. Skin exposure in individuals who have pre-existing dermal conditions may trigger aggravated symptoms. Consider the victim of exposure to be experiencing acute non-specific upper airway reaction

#### **After ingestion**

In case of unlikely ingestion: Rinse your mouth with water and drink plenty of water. DO NOT induce vomiting. Never make an unconscious person ingest anything. Call a doctor immediately.

### **4.2. Main symptoms and effects, acute and delayed**

In case of contact with eyes: Causes severe irritation of the eyes. Skin contact: Causes skin irritation. If inhaled: May irritate the respiratory tract. If swallowed: Irritation of the gastrointestinal mucosa, stomach pain, possibly vomiting and diarrhea.

### **4.3. Indication of any immediate medical care and special treatment required**

Symptomatic treatment.

## **HEADING 5: Fire-fighting measures**

Non-Flammable aerosol. Contains combustible liquid.

### **5.1. Appropriate extinguishing means**

Foam. Extinguishing powder. Carbon dioxide (CO<sub>2</sub>). Sprinkler water jet. Sand.

### **5.2. Specific hazards resulting from the substance or mixture**

In the event of heating or fire, the formation of toxic gases (carbon dioxide, carbon monoxide) is possible.

Explosion hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

### **5.3. Advice to firefighters**



Wear self-contained breathing apparatus and chemical protective suits.

#### **Additional Information**

Use a water jet in the danger perimeter for the protection of people and the cooling of containers. Knock down gases/vapors/mists by spraying with water. Adapt extinguishing measures to the environment. Collect contaminated extinguishing water separately.

### **SECTION 6: Measures to be taken in the event of accidental dispersal**

#### **6.1. Personal Precautions, Protective Equipment and Emergency Procedures**

Ensure sufficient ventilation. Do not breathe gases/fumes/vapors/aerosols. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Keep away from any flames or sparks - Do not smoke.

#### **6.2. Precautions for the protection of the environment**

Prevent entry to sewers and public waters.

#### **6.3. Methods for spill cleanup**

In the event of an accidental spill/release: Wear appropriate PPE including suitable respirators (NIOSHA approved or equivalent) with adequate filters, disposable coveralls/barrier clothing, eye protection (face shield or safety glasses) & gloves (Rubber, neoprene or PVA).

#### **6.4. Reference to other headings**

Safe handling: see paragraph 7

Personal protection: see paragraph 8

Evacuation: see paragraph 13

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Instructions for safe handling**

Use a respiratory protection with a filter. Waterproof protective gloves. Airtight protective eyewear. Keep out of reach of children. Ensure sufficient ventilation.

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Remove all soiled and contaminated clothing before exiting handling area to avoid contamination of other areas.

Do not spray on open flame or other ignition source.

Handle in accordance with good industrial hygiene and safety practice.

##### **Additional Information**

Even after use, do not puncture or incinerate.

#### **7.2. Conditions for safe storage, including possible incompatibilities**

##### **Storage Premises and Container Requirements**

Keep this product in a well-ventilated cool, dry place away from direct sunlight and excess moisture.

Always store in tightly sealed containers.

Only trained personnel may handle opened containers of material, in a ventilated/exhausted facility. Do not expose to temperatures exceeding 50 °C. Keep in fireproof place.

##### **Incompatible condition**

Source of ignition. Direct sunlight. Heat sources.

##### **Technical measures**

Proper grounding procedures to avoid static electricity should be followed.



### **7.3. Specific end-use(s)**

Self defense Pepper Spray

## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

Resins, Oleo-, Capsicum (8023-77-6)	
ACGIH	Not Applicable
OSHA	Not applicable

Diethylene Glycol Monobutyl Ether (112-34-5)		
ACGIH	ACGIH TWA (ppm)	10ppm (inhalable fraction and vapor)

### **8.2. Exposure controls**

#### **Appropriate technical controls**

Technical measures and the application of appropriate working methods take precedence over the use of personal protective equipment. ensure sufficient ventilation and spot suction at critical points. Eyewash stations and clean water should be made available in case of emergency.

#### **Hygiene measures**

Use of appropriate PPE is mandatory: Preventive skin protection with a dermal protection cream. Wash hands and face at the end of work. Do not eat or drink during use. Change impregnated clothing. Wash soiled clothes before reuse.

#### **Eye/face protection**

Use appropriate eye protection (tightly sealed goggles/face shield) and suitable impermeable gloves for handling material.

#### **Hand protection**

In case of direct contact with the mixture :P the approved protective gloves: It is recommended to apply a regreasing cream to the skin. The model of the special chemistry gloves must be chosen according to the concentrations and quantities of chemical substances specific to the position. Recommended Material: Butyl Rubber.

#### **Skin protection**

In case of direct contact with the mixture: Normal workwear.

#### **Respiratory protection**

In case of direct contact with the mixture :

When technical measures of aspiration or ventilation are not possible or insufficient, it is essential to wear respiratory protection. Half-mask with A2P2 filter.

## **SECTION 9: Physical and chemical properties**

### **9.1. Information on essential physical and chemical properties**

**Product:** Indicated for use as self-defense Pepper Spray.

**Color:** Light Amber

**Physical state:** Liquid.



**Odor:** Stinging/burning.  
**pH:** No data.  
**Melting point/ freezing point:** No data.  
**Normal boiling point:** No data  
**Flash point:** 78 °C ( 172°F)  
**Evaporation rate:** No data.  
**Flammability:** No data.  
**Upper/Lower flammability or explosive limits:** No data.  
**Vapor pressure:** No data.  
**Vapor density:** No data.  
**Relative density:** No data.  
**Bulk density:** 0.65 – 0.85 g/cm<sup>3</sup>  
**Water solubility:** Completely soluble in water.  
**Partition coefficient (n- octanol/water):** No data.  
**Auto-ignition temperature:** No data.  
**Decomposition temperature:** No data.  
**Viscosity:** No data.  
**Explosive properties:** No data.  
**Oxidizing properties:** No data.

## **9.2. Other information**

No other data available.

## **SECTION 10: Stability and responsiveness**

### **10.1. Reactivity**

Thermal decomposition generates : Carbon dioxide, carbon monoxide and hydrocarbons.

### **10.2. Chemical stability**

The product is stable under normal conditions of use. Contains gas under pressure; may explode if heated. Extreme risk of explosion by chock, friction, fire or other sources of ignition.

### **10.3. Potential for Hazardous Reactions**

When used in accordance with the regulations, no dangerous reactions are to be expected.

### **10.4. Conditions to avoid**

Hazardous polymerization may occur if exposure to fire condition.

### **10.5. Incompatible materials**

No other data available.

### **10.6. Hazardous decomposition products**

Fume. Carbon monoxide. Carbon dioxide, hydrocarbons.

### **10.7. Conditions to avoid**

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

## **SECTION 11: Toxicological information**

### **11.1. Information on toxicological effects Acute toxicity**

<b>Resins, Oleo-, Capsicum (8023-77-6)</b>	
LC50 inhalation rat (mg/L)	>10000 g/ m <sup>3</sup>



<b>Diethylene Glycol Monobutyl Ether (112-34-5)</b>	
LD50 oral rat	5660 mg/kg
LD50 dermal rabbit	2700 mg/kg
ATE US (oral)	3384.000 mg/ kg body weight
ATE US (dermal)	2700.000 mg/kg body weight

**Skin corrosion/ irritation:** Causes skin irritation.

**Serious eye damage/ irritation:** Causes serious eye irritation.

**Respiratory or skin sensitization:** Not classified.

**Germ cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive toxicity:** Not classified.

**Specific target organ toxicity (single exposure):** Not classified.

**Specific target organ toxicity (repeated exposure):** Not classified.

**Aspiration hazard:**

**Potential Adverse human health effects and symptoms:** Based on available data, the classification criteria are not met.

**Symptoms/ injuries after inhalation:** Shortness of breath.

**Symptoms/ injuries after eye contact:** Causes serious eye irritation.

**Symptoms/ injuries after skin contact:** Causes skin irritation.

## **SECTION 12: Ecological information**

### **12.1. Environmental toxicity:**

No data present.

### **12.2. Persistence and Degradability**

No data present.

### **12.3. Potential for bioaccumulation**

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

### **12.4. Mobility in Soil**

No additional information available.

### **12.6. Other adverse effects**

Avoid release to the environment.

## **SECTION 13: Disposal Considerations**

### **13.1. Waste treatment methods**

#### **Disposal**

Do not allow to enter drains or running water. Dispose of in accordance with local regulations.

#### **Waste disposal code-Product: 160504**

Wastes not otherwise specified in the list; Gases in pressure containers and used chemicals; Gases in pressure containers (including halons) containing dangerous substances.

Special waste



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**Waste disposal code-Residue: 160504**

Wastes not otherwise specified; Gases in pressure containers and used chemicals; Gases in pressure containers (including halons) containing dangerous substances  
Special waste

**Disposal of contaminated packaging**

Cartridges which are not completely empty are considered special waste and must be disposed of accordingly, in accordance with local regulations. Completely empty cartridges can be disposed of with household waste.

**SECTION 14: Transport information**

Tags: 2.2



Classification code: 5A

Special provisions: 190 327 344 625

Limited Quantity (LQ): 1 L

Quantity released: E0

**Maritime transport (IMDG)**

**14.1 UN number:** UN 1950

**14.2. Proper shipping name:** AEROSOL

**14.3. Transport hazard class(es):** 2.2

**14.4 Packing group:** -

Tags: 2.2



Special provisions: 63, 190, 277, 327, 344, 959

Limited Quantity (LQ): 1000mL

Quantity released: E0

EmS: F-D, S-U

**Air transport (ICAO)**

**14.1 UN number:** UN 1950

**14.2. Proper shipping name:** AEROSOL, non flammable

June 2024

In accordance with Regulation (EC) No 1272/2008



**14.3. Transport hazard class(es): 2.2**

**14.4 Packing group: -**

Tags: 2.2



Special provisions: A98 A145 A167 A802  
Limited Quantity (LQ): 30 kg G  
Passenger LQ: Y203  
Quantity released: E0  
IATA-Packing instructions (airliner): 203  
IATA-Maximum quantity (airliner): 75 kg  
IATA-Packing instructions (cargo): 203  
IATA-Maximum quantity (cargo): 150kg

**14.5. Environmental hazards**

Hazardous to the environment: NO

**14.6. Special precautions to be taken by the user**

No special precautionary measures are known.

**14.7. Transport in bulk according to Annex II of the Marpol Convention and the IBC Code**

Not applicable

**Additional information**

No packaging group is assigned to transport hazard class 2.

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

Regulation (EC) no. 1005/2009 on substances that deplete the ozone layer: not applicable

Regulation (EC) no. 648/2004 on detergents: not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: not applicable

Regulation (EC) No 689/2008 of the European Parliament and of the Council concerning the export and import of dangerous chemicals: This mixture does not contain any chemicals subject to the export notification procedure (Annex I).

This mixture contains the following substances of very high concern (SVHC) which have been included in the candidate list according to article 59 of REACH: none/none.



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This mixture contains the following substances of very high concern (SVHC) which are subject to authorization according to Annex XIV of REACH: none/none

#### **National requirements**

#### **15.2. Chemical safety assessment**

For the substances in this mixture, no safety assessment has been conducted.

### **SECTION 16: Other information**

#### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service  
EC: Effective concentration  
EC: European Community  
IATA : International Air Transport Association  
IBC Code: international code of practice for the construction and equipment of ships carrying dangerous chemicals in bulk.  
ICAO : International Civil Aviation Organization  
LC: Lethal concentration  
LD: Lethal dose  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
PBT: Persistent, Bioaccumulative and Toxic substances  
UN: United Nations  
vPvB: very persistent and very bioaccumulative substances  
STOT : Specific Target Organ Toxicity

#### **Additional Information**

The information provided in this Safety Data Sheet is intended to describe the safety rules of the product. They are not intended to guarantee certain characteristics and are based on current knowledge. The Safety Data Sheet has been created based on upstream manufacturers' information by: Company name: Byrna SA (Pty) Ltd Address: Byrna SA (Pty) Ltd 50 Kambathi Street, N4 Gateway Industrial Park, Pretoria, 0184, South Africa Tel: 086-182-0031