



BYRNA MAX PROJECTILES (1% OC / 8% CS)
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 Max Projectiles

(1% OC / 8% CS)

Packaging: Blue and grey round projectiles in plastic tubes/jars.

Plastic Tube size: 5 projectiles.

Plastic jars size: 25 / 95 / 400 projectiles.

Projectiles:

Color: Blue / grey

Caliber: 0.68 cal.

Weight: 3.0g

1.2. Relevant uses of the substance

Self-defense projectiles containing highly irritating powder.

1.3. Information on the supplier of the safety data sheet

Company : Helvetia Defense

Address: Rte de compois 6, 1222 Vesenaz - SWITZERLAND

Phone: +41 22 593 00 01

E-mail : alice.ose@heldef.ch

Interlocutor : Alice Ose

Internet : <https://heldef.ch>

1.4. Emergency call number

Tox Info Suisse - Tél. 145 | 24h (www.toxi.ch)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Hazard categories:

Skin irritation/corrosion: Skin Irrit. 2

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

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.

H334 May cause allergies or asthma symptoms or breathing difficulty if inhaled.

Pictograms :

Careful



Precautionary Statements

P261	Avoid breathing dust / fume / gas / mist /vapours / spray.
P264	Wash...thoroughly after handling.
P271	Use only outdoors or in well-ventilated area.
P272	Contaminated clothing should not be allowed out of workplace.
P280	Wear protective gloves / protective clothing / eye protection / eye protection / face protection / hearing protection /..
P302+ P352	IF ON SKIN: Wash with plenty of water /...
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305,P351+ P338	(P305,P351+ P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
P312	Call a Poison Center / doctor /.../ if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice / attention.
P337 + P313	If eye irritation persists: Get medical advice / attention.
P362	Take off contaminated clothing.
P403, P233 +P405	Store in a well-ventilated place. Keep container tightly closed.

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)	
112945-52-55, 7631-86-9	Silicon Dioxide	<2%
2698-41-1	Ortho-chlorobenzylidene malonitrile (CS)	8%
404-86-4	Organic Capsaicin powder	1 %



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. 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. Be careful in case of vomiting: risk of aspiration!

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.

SECTION 5: Fire-fighting measures

Non flammable material.

5.1. Appropriate extinguishing means

Foam. Extinguishing powder. Carbon dioxide (CO₂). Sprinkler water jet. Sand.

Improper extinguishing means

None known.

5.2. Specific hazards resulting from the substance or mixture

Toxic smoke during combustion. Collect wastewater separately.

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

Do not allow to leak into pipes or running water. Do not allow access to the basement/floor.

6.3. Methods for spill cleanup

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

Evacuate the area where accidental spill/release has occurred.

If possible, introduce mechanical ventilation to the area to reduce the exposure concentration. If the concentration exceeds recommended limits of exposure, clean-up personnel should wear self-contained breathing apparatus and full protective clothing to mitigate incapacitating effects of the capsaicin containing material.

Contain any spillage and collect powder material using suitable dust binding agents and transfer to a waste disposal container that can be tightly sealed.

Waste Disposal Measures:

Not considered a hazardous waste as referenced in 40 CFR 261.24 or 261.3.

Dispose contents/container to a special waste collection point.

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.

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. Contact with skin and eyes should be avoided.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Remove all soiled and contaminated clothing before exiting handling area to avoid contamination of other areas.

7.3. Specific end-use(s)

Self-defense / Immobilizing projectiles.

SECTION 8: Exposure controls/personal protection



8.1. Control parameters

Exposure limit values

This material does not contain substances that have been listed with occupational exposure limit values.

Additional Tips

No exposure threshold is currently known.

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

Respirator devices with suitable filters: To be used when handling exposed material. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Respirator cartridges of type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) is advised. Use appropriate eye protection (tightly sealed goggles/face shield) and suitable impermeable gloves for handling material.

SECTION 9: Physical and chemical properties

9.1. Information on essential physical and chemical properties

Product type: Highly irritant powder inside round projectiles.

Color: White (powder inside the projectiles)

Physical state: Powder

Odor: Stinging/burning.

pH: No data.

Melting point/ freezing point: No data.

Normal boiling point: No data.

Flash point: No data.

Evaporation rate: No data.

Flammability: No.

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/cm³



Water solubility: Sparingly partially 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

No dangerous reactivity under normal environmental conditions.

10.2. Chemical stability

The product is stable under normal environmental conditions (room temperature).

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

Keep away from heat, sparks, flames, hot surfaces, and moisture. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Keep packaging sealed.

10.5. Incompatible materials

Acids, Fluorite, Magnesium with Hydrogen.

10.6. Hazardous decomposition products

In the event of thermal decomposition, e.g. due to overheating during operation or in the event of a fire, the formation of gases and vapors that are toxic to health, such as carbon monoxide or carbon dioxide, is possible.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Acute toxicity

Data toxicity for each element	
Element	LD50*
CAPSAICIN	47.2 mg/kg
ORTHO-CHLOROBENZYLIDENE MALONONITRILE	178 mg/kg
SILICON DIOXIDE	> 5000 mg/kg

*values based on a study done on mice (orally), as published in the scientific literature and/or provided by the manufacturer.

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 fate / toxicity:

No data present.

12.2. Persistence and Degradability

No data present.

12.3. Potential for bioaccumulation and results of PBT and vPvB assessments

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

Practically insoluble in cold water. This product should not be released into the environment.

12.6. Other adverse effects

No data present.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Disposal as hazardous waste. Treat all soiled containers as the waste itself. The recommendation is for a certified waste treatment company to dissolve or mix the material with a combustible solvent and burn it in a chemical incinerator equipped with an afterburner and scrubber. Comply with all national, provincial and local environmental regulations. Dispose of waste in accordance with local and/or national regulations.

Waste Disposal Code-Residues

061002 Waste containing hazardous substances.

110198 Other waste containing hazardous substances.

070216 Waste containing hazardous silicones.

160904 Oxidizing substances not elsewhere specified.

060903 Waste from calcium-based reactions containing hazardous substances.

SECTION 14: Transport information

This substance is non-hazardous for land, sea and rail transport of goods. It contains up to 4% by weight of an aviation-regulated solid, n.o.s. (Nonivamide).

Marine pollutant: No.

Transport hazard class(es)

IATA Classification UN number: UN2811 and UN3448

Hazard class: Hazard Class 6.1 Packaging group: III

14.1. Ecological hazards

No.

14.2. Special precautions to be taken by the user

No special precautionary measures are known.



14.3. Bulk transport in accordance with Annex II of the MARPOL Convention and the IBC Code

Non applicable.

Additional Information

No packing groups are 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.

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

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS : Chemical Abstracts Service

CE : Effective concentration

EC: European Community

NE : European Standard

IATA : International Air Transport Association

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

CAO: International Civil Aviation Organization

IMDG: International Maritime Code for Dangerous Goods

ISO: International Organization for Standardization

CLP: Classification, Labeling, Packaging

IUCLID: International Uniform Chemical Information Database

CLP: Lethal Concentration

LD: Lethal Dose

LOG Kow or LogP: octanol-water partition coefficient

MARPOL: International Convention for the Prevention of Marine Pollution from Ships



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OECD: Organization for Economic Co-operation and Development

PBT: Persistent, Bioaccumulative and Toxic Substances

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

TRGS: Technical Rules for Hazardous Substances

UN: United Nations

VOCs: Volatile Organic Compounds

vPvB: Very Persistent and Very Bioaccumulative Substances

VwVws: Water Hazardous Substances Classification By-law

CPE: Water Pollution Class

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

TLV: Threshold Limiting Value

STOT: Specific Target Organ Toxicity

Text of the H and EUH sentences (Number and full text)

H335 May cause respiratory irritation

H319 Causes severe eye irritation

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H334 May cause allergies or asthma symptoms or breathing difficulty if inhaled.

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