

	<b>FIOCCHI MUNIZIONI S.p.A.</b> <b>MSDS</b> <b>CARTRIDGE CALIBER</b> <b>9x17 RED HUMANE</b> <b>SLAUGHTER</b>	Print Date: 14.02.2023
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Code:

Name: Cartridge 9 x 17 RED Humane Slaughter

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

Description/Use: Blank Cartridge Humane Slaughter

Usi sconsigliati: Uses other than those indicated above.

### 1.3. Details of the supplier of the safety data sheet

Company Name: FIOCCHI Munizioni S.p.A.

Address: Via Santa Barbara, 4

Location and Country: 23900 LECCO - LC -

ITALIA

Tel.: +39 0341 473111

Fax: +39 0341

e-mail: [c.bilucaglia@fiochi.com](mailto:c.bilucaglia@fiochi.com)

MSDS Responsible: Carlo Bilucaglia

### 1.4. Emergency telephone number

For urgent inquiries, contact:

Telephone numbers of the main Italian Poison Centers (active 24/24 hours):

Centro Antiveleni di Milano 02 66101029 (CAV Ospedale Niguarda Ca' Granda - Milano)

Centro Antiveleni di Pavia 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia)

Centro Antiveleni di Bergamo 800 883300 (CAV Ospedali Riuniti - Bergamo)

Centro Antiveleni di Firenze 055 7947819 (CAV Ospedale Careggi - Firenze)

Centro Antiveleni di Roma 063054343 (CAV Policlinico Gemelli - Roma)

Centro Antiveleni di Roma 0649978000 (CAV Policlinico Umberto I - Roma)

Fiochi Munizioni S.p.A. +39 0341 473111 (Technical Support - Italian time: 08.00 ÷ 17.00)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The product is considered dangerous according to the provisions of Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Any additional information regarding health and / or environmental risks is provided in the sections. 11 and 12 of this sheet.

Classification and indications of danger:

### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and adjustments.

This article, which is absolutely forbidden to tamper with, contains dangerous substances that are not released under normal or reasonably foreseeable conditions of use, as they are completely encapsulated.

Heat, sparks, flames as well as other sources, such as electrostatic currents or electromechanical equipment, could lead to the detonation of the article.

REACH registration number: Lead Styphnate: 01-2119543737-30-0001

Registration No. REACH Tetrazene: 01-2120767928-32-0004

Hazard Pictograms:



GHS01

Signal Word: Attention

Hazard statements:

H204

Fire or projection hazard.

Revision N°1

Replaces the revision N°0 of 04.07.2022

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Prevention precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P250	Do not subject to grinding/shock/impact/friction.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P102	Keep out of reach of children.

It contains: Lead styphnate, a substance put Candidate List.

### 2.3. Other hazards

Based on the available data, the product does not contain PBT or vPvB substances in a percentage higher than 0.1%.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable.

### 3.2. Mixtures

The cartridge is a complex article, consisting of other articles containing then mixtures. The various articles will be indicated below, highlighting the constituent mixtures and, both qualitatively and quantitatively, the dangerous substances they contain. No nanoparticles were used in the production of primer mixture.

#### Article: Propellant.

Mixture contained: propellant powder.

Dangerous substances contained: See table below.

INDEX Number	Substance identification data	EC Number	CAS Number	Classification		Percentage in the mixture
				Class codes and hazard category	Hazard Identification Codes	
	Nitrocellulose	682-719-5	9004-70-0		H201	50% ÷ 53%
603-034-00-X	Nitroglycerine	200-240-8	55-63-0	Unst. Expl. Acute Tox 2* Acute Tox 1 Acute Tox2* STOT RE 2* Aquatic Chronic 2	H200 H300 H310 H330 H373** H411	47% ÷ 50%
	Centralite 1 (1,3-diethyl-1,3-diphenylurea)	201-645-2	85-98-3	Acute Tox 3* Acute Tox 3* Acute Tox 3* Aquatic Acute 1 Aquatic Chronic 1	H302 H412	0.5% ÷ 1.5%

#### Article: Primer device

Mixture contained: Primer mixture.

Dangerous substances contained: See table below.

INDEX Number	Substance identification data	EC Number	CAS Number	Classification		Percentage in the mixture
				Class codes and hazard category	Hazard Identification Codes	
609-019-00-4	Lead Styphnate	239-290-0	15245-44-0	Unst. Expl. Acute Tox 4* Acute Tox 4* STOT RE 2* Aquatic Acute 1 Aquatic Chronic 1 Repr. 1A	H200 H202 H332 H373** H400 H410 H360Df	30% ÷ 40%
	Tetrazene	203-659-4	109-27-3	Unst. Expl.	H200	2% ÷ 6%
603-035-00-5	PETN	201-084-3	78-11-5	Unst. Expl.	H200	2% ÷ 6%
	Antimony Sulphide	215-713-4	1345-04-6	Acute Tox 4 Acute Tox 4 Aquatic Chronic 2	H302 H332 H411	10% ÷ 20%
	Barium Nitrate	233-020-5	10022-31-8	Acute Tox 3 Eye Irrit. 2 Acute Tox 4	H272 H301 H319 H332	45% ÷ 55%

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**Article: Bullet**

Since the ammunition object of this card is blank, there is no bullet

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

This article, which is absolutely forbidden to tamper with and dismantle contains dangerous substances that are not released under normal or reasonably foreseeable conditions of use, as they are completely encapsulated.

The first aid measures refer to an unlikely accidental contact with the mixtures present in the article or with the fumes that develop after the shot. If significant levels of contamination occur, immediately remove the cause of the exposure; make sure the people involved are in a protected area, well ventilated and warm. Request medical assistance.

**After inhalation:** In case of inhalation of the product, allow fresh air to breathe.

Inhalation of fumes generated by the combustion / deflagration /detonation of powders can cause irritation to the respiratory tract and nasal passages, coughing and difficulty breathing. If these symptoms occur, move the individual immediately away from the place of exposure to open air. If the exposed person shows breathing difficulties, administer oxygen. In case of respiratory arrest, perform artificial respiration, keep the affected person warm and calm.

There may be a risk of pulmonary edema as a delayed effect of this exposure. Request medical assistance. If symptoms of carbon monoxide (CO), lead and / or nitrogen oxide (NO<sub>x</sub>) poisoning occur, such as nausea, fatigue, confusion and fainting, call a doctor and remain under medical observation for at least 48 hours. There are specific emergency medical procedures for poisoning with carbon monoxide (CO) and / or nitrogen oxides (NO<sub>x</sub>).

**After contact with the skin:** wash the affected area with plenty of water and soap.

If necessary, remove contaminated clothing and / or footwear immediately.

**After contact with eyes:** gently wash eyes with plenty of cold water for at least 15 minutes and consult a specialist.

**After ingestion:** do not induce vomiting and contact a doctor.

**Following burns:** cool the affected area immediately with fresh water for as long as possible. Do not remove clothing attached to the skin. Contact a specialized center for the treatment of burns.

**Following injuries caused by accidental detonation:** immediately take the injured person to the nearest emergency room.

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

**General notes:** This article, of which tampering and disassembly is absolutely prohibited, contains dangerous substances that are not released under normal or reasonably foreseeable conditions of use, as they are completely encapsulated. The main symptoms, both acute and delayed, are related to prolonged exposure to some of the substances that make up the mixtures or to the fumes of the explosion.

It is unlikely that the amount of particles a shooter could be exposed to after firing a cartridge, or during a normal shooting session, may be sufficient to cause some of these effects.

**Inhalation:** inhalation of dust may cause irritation to the respiratory tract. Exposure to the fumes and / or gases of detonation can cause nausea, fatigue, confusion and fainting. Exposure may also cause irritation to the respiratory tract, bronchitis, bronchopneumonia and acute lung edema and death.

**Skin contact:** possible irritation following contact with mixtures making up the product.

**Eyes contact:** may cause irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

In the event of an accident or feeling unwell, seek medical advice immediately and, if possible, show this sheet.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media: water spray and CO<sub>2</sub>.

If the fire reaches the product, leave the area and let it burn until it is completely extinguished.

Not suitable extinguishing media: No one in particular.

### 5.2. Special hazards arising from the substance or mixture

In the event of a fire in a warehouse, evacuate the area and keep personnel out of the danger area. Maintain a safety distance of at least 300 m.

If the fire directly affects the product, DO NOT ATTEMPT TO TURN OFF THE FIRE, cool the surrounding environment, keep at a safe distance and immediately protect the operators using an adequate shield: RISK OF EXPLOSION. Approach only after being absolutely sure that the fire has died out. After turning off the fire, wet the area with water and monitor it for at least 6 hours. Do not touch any projected product or substance without the personal protective equipment required.

Avoid inhaling the fumes produced by the fire.

Only if the fire has not yet attacked the product, try to extinguish it by any means available, immerse the product in water to cool and, if possible, remove dust from the danger area.

### 5.3. Advice for firefighters

In the event of a fire, use normal fire-fighting equipment: self-contained breathing apparatus and protective clothing.

The removal and destruction of items exposed to fire are the responsibility of professionals.

When thermal decomposition occurs, irritating or poisonous vapours and gases may be released.

CO, CO<sub>2</sub>, nitrogen oxides (NO<sub>x</sub>) and heavy metals can be produced.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

- Do not smoke.
- Reach a safe area.

#### For emergency personnel

- Isolate the area for a safe distance. In this area remove any source of ignition.
- Prevent access by unauthorized persons and the movement of vehicles in the contaminated area.
- Observe the safety measures concerning the handling of explosives.
- Avoid direct contact with the product. Always work with the appropriate personal protective equipment in accordance with the provisions of § 8.

### 6.2. Environmental precautions

In case of accidental release of the product, the presence of a specialized emergency team is not required. In case of release of a large quantity and in the event that the product comes into contact with a stream or sewer, inform the responsible authorities.

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

#### Indication for containment

To reduce the risk of fire, soak the spilled product with water, being careful not to involve the waste water conductors. Collect the product manually with spark-proof tools and place it in properly labeled containers that comply with the provisions of § 14. Do not use electrical equipment to collect the product. For disposal, follow the instructions contained in § 13 below. In case of particular difficulties, contact the technical assistance service of Fiocchi Munizioni S.p.A.

### 6.4. Reference to other sections

Information on personal protection and disposal is provided in sections 8 and 13.

## SECTION 7: Handling and storage

The product is subject to regulatory restrictions dictated for the handling and storage of explosives, which the user must know and apply.

For further details see "Technical manual for product and personal safety" dated 12/21/2017.

### 7.1. Precautions for safe handling

- Do not smoke
- Keep the product away from sources of heat, flames, sparks and electrostatic discharge.
- Do not use any electrical appliance near the product.
- Avoid shocks and friction.
- Avoid contact with incompatible materials; see § 10 below.
- Limit any handling of damaged products to decontamination operations as described in § 6.3.
- Do not eat or drink in the places where the product is used.

### 7.2. Conditions for safe storage, including any incompatibilities

- Do not smoke
- Keep the product away from sources of heat, flames, sparks and electrostatic discharge.
- Store in cool, dry and ventilated areas with environments protected from direct sunlight. The storage temperature must be kept between -20 ° C and + 25 ° C. Relative humidity must be kept between 30% and 75%.
- Clean the storage area and keep the product away from other flammable materials.
- Do not store with other incompatible hazardous materials within the same storage area, as reported in § 10.5.
- Do not exceed the storage capacities specified for each area.
- Discard any defective, altered or incomplete packaging.
- Do not fill or empty the packaged product in the storage area.
- Stack the packaged product in a stable manner.
- Do not exceed the stacking height required by current regulations and do not exceed in any case a height of 3 m above the floor during product stacking.
- Always use the approved packaging prescribed in the following § 14 within the limits of the maximum allowable load indicated on it.

### 7.3. Specific end use(s)

The cartridge must be used in arms of the appropriate caliber and by trained personnel in its use and in any case in compliance with the regulations in force.

The user, before introducing the cartridges into the weapon, must check that the ammunitions are in good condition and undamaged and that the weapons are kept in proper operating conditions.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Normative requirements

BGR	България	Министерство на труда и социалната политика министерство на здравеопазването наредба No 13 от 30 декември 2003 г
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT – Limites de exposicion profesional para agentes quimicos en España 2015
EST	Eesti	Töökeskonna keemiliste ohutegurite piinormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FRA	France	JORF n° 0109 du 10 mai 2012 page 8773 texte n°102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φυλλου 19 - 9 Φεβρουαριου 2012
HRV	Hrvatska	NN 13/09 – Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII.22.) NGM rendelet a munkahelyek kémiai biztonságáról
ITA	Italia	Decreto Legislativo 9 Aprile 2008, N°81
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23/2007 CHEMINIU MEDŽIAGU 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Kīmiko vielu aroda ekspozīcijas robežvērtības [AER] darba vides gaisā 2012.
NLD	Nederland	Databank of the Social and Economic Council of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning I arbeidsatmosfære
SVK	Slovensko	NARIADENIE VLADY Slovenskej republiky z 20.júna 2007
SVN	Slovenija	Uradni list Republike Slovenije 15.6.2007
SWE	Sverige	Occupational Exposure limit Values, AF 2011:18
EU	OEL EU	Direttiva (UE) 2017/164; Direttiva 2009/161/UE; Direttiva 2006/15/CE; Direttiva 2004/37/CE; Direttiva 2000/39/CE; Direttiva 91/322/CEE.
	TLV-ACGIH	ACGIH 2018

Hazardous components of the primer mixture and propellant:

Hazardous components	CAS Number	TLV – TWA (8 hours)
Lead and its compounds	7439-92-1	0.05 mg/m <sup>3</sup>
Barium nitrate	7757-79-1	Not detected
Nitrocellulose (N > 12,6%)	9004-70-0	Not detected
Nitroglycerine	55-63-0	0,46 mg/m <sup>3</sup> (acute)
Tetrazene	109-27-3	Not detected

Exposure limit values from the "ACGIH American Conference of Governmental Hygienists Industrial" of 2018.

### 8.2. Exposure controls

During indoor shooting sessions, it is advisable to always ventilate the rooms, especially if significant quantities of fumes are generated. Hygiene measures to prevent exposure:

- Do not eat and / or drink when handling the product.
- After handling, wash hands thoroughly with soap and water.
- Remove contaminated work clothing / personal protective equipment before leaving work.

**Eye and face protection:** use safety glasses with side protection and unbreakable lenses.

**Hearing protection:** use suitable ear protection during shooting sessions.

**Respiratory protection:** not necessary in ventilated environments. In non-ventilated areas, use a mask with a P2 protective filter. In environments where a fire or explosion has occurred, use a self-contained breathing apparatus.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Parameter	Value
Physical state	Solid
Colour	Yellow, typical of brass, with upper part red painted
Odour	None
pH-Value (at 20 °C)	n.a.
Melting point	n.a.
Initial boiling point and boiling range	n.a.
Boiling range	n.a.
Flash point	n.a.
Evaporation rate	n.a.
Gas and solid Flammability	n.a.
Lower flammability limit	n.a.
Upper flammability limit	n.a.
Lower explosive limit	130°C
Upper explosive limit	>130°C
Vapor pressure	n.a.
Vapor density	n.a.
Bulk density	n.a.
Solubility	Insoluble in water
Partition coefficient: n-octanol / water	n.a.
Auto-ignition temperature	> 130°C
Decomposition temperature	n.a.
Viscosity	n.a.
Explosive properties	Explosive
Oxidising properties	n.a.

### 9.2. Other information

n.a.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The primer mixture contains oxidizing substances and combustible materials and has a high reactivity to external ignition sources.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

If subjected to strong thermal and / or electrical, mechanical shocks, the cartridge can explode, developing high amounts of heat, gas and fumes containing dangerous decomposition products.

### 10.4. Conditions to avoid

The cartridge must not come into contact with sources of possible ignition such as:

- > Flames or heat sources
- > Sparks
- > Electrostatic discharge

Must be avoided

- > Friction
- > Shocks

### 10.5. Incompatible materials

Alkalis and acids, amines, flammable materials, strong oxidants.

### 10.6. Hazardous decomposition products

CO, CO<sub>2</sub> and nitrogen oxide (NO<sub>x</sub>), heavy metal oxides (Pb, Ba, Sb) and sulfur dioxide (SO<sub>2</sub>).

In the event of fire, toxic and irritating vapors and fumes containing LEAD may be generated.

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## SECTION 11: Toxicological information

This article, which is absolutely forbidden to violate contains dangerous substances that are not released under normal or reasonably foreseeable conditions of use, as they are completely encapsulated.

### 11.1. Information on toxicological effects

#### Acute effects

The physical nature of the product makes any type of absorption unlikely; however, during firing, a reduced quantity of fumes and gases can be formed, generated by chemical reactions of the substances inside, which can cause damage to health.

#### Acute toxicity

During the firing, especially in a closed environment that is not sufficiently ventilated, it is possible to absorb fumes and gases through the respiratory system, just as residual firing can be found on the hands that can even reach the eyes, if not adequately protected. In the event of an accident, all parts of the body that are not adequately protected are exposed.

Under normal operating conditions, with the adoption of the appropriate Personal Protective Equipment (P.P.E.) and with adequate ventilation during shooting even in a closed environment, there is currently no news of any symptom for the shooter.

Direct studies on humans have shown that transfer of lead from a nursing mother can occur and in exceptional circumstances could lead to exceeding the acceptable level of 16 µg / dl.

Available data also indicate that high lead exposure can have a marked negative impact on sperm quality.

As far as lead and its compounds are concerned, all DNELs are based on systemic biomarkers of internal exposure (lead in the blood) and not on external exposure. Potential toxicity is then assessed independently of the route of exposure and derived systemic DNELs.

## SECTION 12: Ecological information

Use according to good working practices, avoiding to disperse the product in the environment. Notify the competent authorities if the product has reached waterways or sewers or if it has contaminated the soil or vegetation.

### 12.1. Toxicity

#### Lead and its compounds

PNEC

Environmental compartment	Pb concentration	
Freshwater	2,4 µg/l	
Marine water	3,3 µg/l	
Sewage treatment plant (STP)	100 µg/l	
Sediment (freshwater)	186 mg/kg sediment dw	
Sediment (marine water)	168 mg/kg sediment dw	
Hazard for Terrestrial Organism	212 mg/kg soil dw	
Hazard for Predators: Secondary poisoning	10,9 mg/kg food	
Organism	Exposure duration	Pb concentration
Short-term toxicity to fish	49 d	LC50: 280,2 µg/l l
Long-term toxicity to fish	3 m	NOEC: 48 µg/l
Short-term toxicity to aquatic invertebrates	4 d	LC50: 35÷ 6820 µg/l
Long-term toxicity to aquatic invertebrates	4 m	NOEC: 12 µg/l
Toxicity to aquatic algae and cyanobacteria	72 h	EC50: 20,5÷364 µg/l
Toxicity to aquatic plants other than algae	7 d	EC50: 1,07÷8,53 µg/l
Toxicity to microorganisms	9 h	EC10: 1 mg/l



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**Barium nitrate**

PNEC

Environmental compartment	Ba concentration	
Freshwater	115 µg/l	
Marine water	Aquatic toxicity unlikely	
Sewage treatment plant (STP)	62,2 mg/l	
Sediment (freshwater)	600 mg/kg sediment	
Sediment (marine water)	No hazard identified	
Hazard for Terrestrial Organism	207,7 mg/kg soil dw	
Hazard for Predators: Secondary poisoning	No potential for bioaccumulation	
Organism	Exposure duration	Ba concentration
Short-term toxicity to fish	4 d	LC50: 3,5÷174 mg/l
Long-term toxicity to fish	33 d	NOEC: 1,26÷100 mg/l
Short-term toxicity to aquatic invertebrates	48 h	LC50: 14,5 mg/l
Long-term toxicity to aquatic invertebrates	21 d	NOEC: 2,9 mg/l
Toxicity to aquatic algae and cyanobacteria	72 h	EC50: 1,15÷100 mg/l
Toxicity to aquatic plants other than algae	No data available	
Toxicity to microorganisms	3 h	EC50: 1 g/l

**Nitroglycerine**

PNEC

Environmental compartment	NG concentration	
Freshwater	19,8 µg/l	
Marine water	Aquatic toxicity unlikely	
Sewage treatment plant (STP)	No emission to STP expected	
Sediment (freshwater)	No exposure of sediment expected	
Sediment (marine water)	No exposure of sediment expected	
Hazard for Terrestrial Organism	No exposure of soil expected	
Hazard for Predators: Secondary poisoning	No potential for bioaccumulation	
Organism	Exposure duration	NG concentration
Short-term toxicity to fish	4 d	LC50: 1,9 ÷ 3,58 mg/l
Long-term toxicity to fish		No data available
Short-term toxicity to aquatic invertebrates	48 h	LC50: 17,83 mg/l
Long-term toxicity to aquatic invertebrates		No data available
Toxicity to aquatic algae and cyanobacteria	4 d	EC50: 1,15 mg/l
Toxicity to aquatic plants other than algae		No data available
Toxicity to microorganisms		No data available

**PETN**

PNEC

Environmental compartment	PETN concentration	
Freshwater	300 µg/l	
Marine water	No data: aquatic toxicity unlikely	
Sewage treatment plant (STP)	No data: aquatic toxicity unlikely	
Sediment (freshwater)	No exposure of sediment expected	
Sediment (marine water)	No exposure of sediment expected	
Hazard for Terrestrial Organism	No exposure of soil expected	
Hazard for Predators: Secondary poisoning	No potential for bioaccumulation	
Organism	Exposure duration	PETN concentration
Short-term toxicity to fish	4 d	LC50: 926 mg/l
Long-term toxicity to fish		No data available
Short-term toxicity to aquatic invertebrates	48 h	LC50: 292 mg/l
Long-term toxicity to aquatic invertebrates		No data available
Toxicity to aquatic algae and cyanobacteria		No data available
Toxicity to aquatic plants other than algae		No data available
Toxicity to microorganisms		No data available

**12.2. Persistence and degradability**

Not biodegradable.

**12.3. Bioaccumulative potential**

n.a.



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#### 12.4. Mobility in soil

Lead and other metals released into the environment during the degradation process may in some cases migrate into the ground.

#### 12.5. Results of PBT and vPvB assessment

Based on the available data, the product does not contain PBT or vPvB substances in a percentage higher than 0.1%.

#### 12.6. Other adverse effects

Data not available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

The product must be collected for disposal in accordance with § 6 and stored in a place under custody as indicated in § 7.

Destruction by incineration exclusively in sites authorized for the disposal of explosives.

Do not mix with other incompatible waste products (see § 10).

The user is responsible for returning unused items (expired or damaged), empty containers recovered after use and packaging to a specialized facility in accordance with all local laws and regulations and national regulations concerning the materials of waste of hazardous substances.

European waste catalog: 16 04 01 \* Ammunition waste.

In case of difficulty, contact the technical assistance service of Fiocchi Munizioni S.p.A.

If the packaging is in perfect condition and properly stored, it can be reused to pack an identical product. Otherwise, treat in the same way as a waste and residue as indicated in §13.1.

### SECTION 14: Transport information

#### 14.1. UN number

0323

#### 14.2. UN proper shipping name

Cartridges for weapons, blank

#### 14.3. Transport hazard class(es)

Class: 1  
Division: 1.4  
Compatibility Group: S

#### 14.4. Packing group

Class: 1  
Division: 0323  
Compatibility Group: 1.4S  
Product: 47  
Mixed packing: It is NOT permitted for packages containing substances or class items:

4.1 + 1  
5.2 + 1  
1A and 1L  
1.4A and 1.4L  
1.5A and 1.5L  
1.6A and 1.6L

#### RID

Class: 1  
Division: 0323  
Compatibility Group: 1.4S  
Product: 47  
Mixed packing: It is NOT permitted for packages containing substances or class items:

4.1 + 1  
5.2 + 1  
1A and 1L  
1.4A and 1.4L  
1.5A and 1.5L  
1.6A and 1.6L

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#### IMDG

Class: 1  
Division: 1.4  
Compatibility Group: S  
UN Number: 0323  
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#### IATA

ERG Code: 3L



Danger Labels: PASSENGER & CARGO

#### Passengers & Cargo Aircraft:

Maximum permissible net mass per transport unit: 25 kg

#### Cargo Aircraft only:

Maximum permissible net mass per transport unit: 100 kg

#### 14.5. Environmental hazards

Under normal conditions there is no danger to the environment, while following a fire or explosion refer to the previous sections.

#### 14.6. Special precautions for user

No special precautions are required during transport.

See "Technical manual for product and personal safety" dated 12/21/2017.

#### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant information.

### SECTION 15: Regulatory information

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

Seveso category:

Substances inside:

Diphenylamine	N° CAS: 122-39-4	Seveso Category: H2; E1
Nitroglycerine	N° CAS: 55-63-0	Seveso Category: P1a; H1; H2; E2
Lead Styphnate	N° CAS: 15245-44-0	Seveso Category: P1a; E1
Tetrazene	N° CAS: 109-37-3	Seveso Category: P1a

Substances in Candidate List (Art. 59 REACH): the article contains SVHC substances in quantities greater than 0.1%.

Substances SVHC inside:

Lead Styphnate N° CAS: 15245-44-0 Cause classification SVHC: Toxic for reproduction, category 1A

Restrictions relating to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006: No substance present

Point 3.

Liquid substances or mixtures that meet the criteria for one of the following hazard classes or categories as per Annex I of Regulation (EC) No. 1272/2008: No substance present

a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;

b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;

c) hazard class 4.1;

d) hazard class 5.1.

Point 40.

Substances classified as flammable gases of category 1 or 2, flammable liquids of category 1, 2 or 3, flammable solids of category 1 or 2, substances or mixtures which, in contact with water, give off flammable gases of category 1, 2 or 3, category 1 pyrophoric liquids, even if they are not included in Annex VI, part 3, of Regulation (EC) No. 1272/2008.

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Substances subject to authorization (Annex XIV REACH): No substance present.

Substances subject to export notification obligation Regulation (EC) 649/2012: No substance present.

Substances subject to the Rotterdam Convention: No substance present.

Substances subject to the Stockholm Convention: No substance present.

Health checks: According to the current legislation on health and safety in the workplace.

COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC):

ANNEX I: LIST OF BINDING OCCUPATIONAL EXPOSURE LIMIT VALUES;

Name of agent	EINECS N° (1)	CAS N° (2)	Occupational exposure limit value 8 h (3)		Occupational exposure limit value short-term (4)	
			mg/m <sup>3</sup> (5)	ppm (6)	mg/m <sup>3</sup>	ppm
Inorganic lead and its compounds			0.15			

(1) EINECS: European Inventory of Existing Commercial Chemicals Substances.

(2) CAS: Chemical Abstract Service.

(3) Measured or calculated in relation to a reference period of eight hours, time-weighted average.

(4) A limit value above which exposure should not occur, and which is related to a 15 minute period unless otherwise specified.

(5) mg/m<sup>3</sup> = milligrams per cubic meter of air at 20°C and 101.3 kPa.

(6) ppm = parts per million by volume in air (ml/m<sup>3</sup>)

COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC):

ANNEX II: BINDING BIOLOGICAL LIMIT VALUES AND HEALTH SURVEILLANCE MEASURES

1. Lead and its ionic compounds

1.1. Biological monitoring must include measuring the blood-lead level (PbB) using absorption spectrometry or a method giving equivalent results. The binding biological limit value is:

70 µg Pb/100 ml blood

1.2 Medical surveillance is carried out if:

— exposure to a concentration of lead in air is greater than 0,075 mg/m<sup>3</sup>, calculated as a time-weighted average over 40 hours per week, or

— a blood-lead level greater than 40 µg Pb/100 ml blood is measured in individual workers.

1.3 Practical guidelines for biological monitoring and medical surveillance must be developed in accordance with Article 12(2). These must include recommendations of biological indicators (e.g., ALAU, ZPP, ALAD) and biological monitoring strategies.

## 15.2. Chemical safety assessment

At the time of drafting this safety data sheet, the exposure scenario of the substances constituting the product was not available and therefore no chemical safety assessment was carried out.

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## SECTION 16: Other information

Text of the hazard statements (H) mentioned in the sheet:

H200	Unstable explosive.
H201	Explosive; mass explosion hazard.
H202	Explosive; severe projection hazard.
H204	Fire or projection hazard.
H272	May intensify fire; oxidizer.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H360FD	May damage fertility or the unborn child.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long-lasting effects.
H411	Toxic to aquatic life with long-lasting effects.

Test of Prevention precautionary statements (P):

P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original container.
P250	Do not subject to grinding/shock/.../friction.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use the personal protective equipment required.
P314	Get medical advice/attention if you feel unwell.
P372	Explosion risk in case of fire.
P401	Store in a dry, well ventilated place
P501	Dispose of contents/container in accordance with local/regional/national/international regulation
P370+P380+P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Text of the Seveso categories

E1	Hazardous to the aquatic environment, acute toxicity category 1 or chronic toxicity 1.
E2	Hazardous to the aquatic environment, chronic toxicity category 2.
H1	ACUTE TOXICITY Category 1, all routes of exposure.
H2	ACUTE TOXICITY - Category 2, all routes of exposure - Category 3, exposure by inhalation
P1a	Explosive

Class codes and hazard categories

Acute Tox. 1,2,3,4	Acute toxicity, category 1,2,3,4.
STOT RE 2	Specific toxicity for target organs. Repeated exposure, cat. 2.
Aquatic Chronic 1,2	Hazardous to the aquatic environment, chronic toxicity, category 1.2.
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1.
Eye Irrit. 2	Causes eye irritation, category 2
Unst. Expl.	Unstable explosive
Lact.	Toxic for reproduction; effects on breastfeeding
Repr. 1A, 1B	Toxic for reproduction, category 1A, 1B.

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#### LEGENDA

- ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
- CAS NUMBER	Chemical Abstract Service Number.
- CE NUMBER	European Community Number
- CLP	Regulation CE 1272/2008, concerning Classification, Labelling and Packaging of Chemicals.
- DNEL	Derived No Effect Level
- ECHA	European Chemicals Agency
- GHS	Globally Harmonized System
- IATA DGR	International Air Transport Association Dangerous Goods Regulations
- IMDG	International Maritime Dangerous Goods
- INDEX NUMBER	Identification number of a substance included in Annex VI of the CLP.
- LC 50	Lethal concentration for 50% of the population subject to testing
- PBT	Persistent, bioaccumulable, toxic according to the REACH Regulation
- PEC	Predicted Environmental Concentration
- PNEC	Predicted No Effect Concentration
- REACH	Regulation CE 1907/2006 (Registration, Evaluation, Authorization of Chemicals)
- RID	Règlement International concernant le transport des marchandises Dangereux par chemin de fer
- TLV	Threshold Limit Value
- TLV STEL	Threshold Limit Value - Short Term Exposure Limit
- TWA	Time Weighted Average
- vPvB	Very Persistent, very bioaccumulable according to the REACH Regulation
- WKG	Water hazard class (Germany)

#### GENERAL BIBLIOGRAPHY

1. Regulation (CE) 1907/2006 (REACH)
2. Regulation (CE) 1272/2008 (CLP)
3. Regulation (UE) 790/2009 (I Atp. CLP)
4. Regulation (UE) 2015/830
5. Regulation (UE) 286/2011 (II Atp. CLP)
6. Regulation (UE) 618/2012 (III Atp. CLP)
7. Regulation (UE) 487/2013 (IV Atp. CLP)
8. Regulation (UE) 944/2013 (V Atp. CLP)
9. Regulation (UE) 605/2014 (VI Atp. CLP)
10. Regulation (UE) 2015/1221 (VII Atp. CLP)
11. Regulation (UE) 2016/918 (VIII Atp. CLP)
12. Regulation (UE) 2016/1779 (IX Atp. CLP)
13. Regulation (UE) 2017/776 (X Atp. CLP)
14. The Merck Index – 10<sup>th</sup> Edition
15. Handling Chemical safety
16. INRS – Fiche Toxicologique (toxicological sheet)
17. Patty – Industrial Hygiene and Toxicology
18. N.I. Sax – Dangerous Properties of Industrial Materials – 7, 1989 Edition
19. Web Site IFA GESTIS
20. Web Site ECHA

#### CHANGES RESPECT TO THE PREVIOUS EDITION

Paragraph 3.2, paragraph 15.1, highlighted by a bar on the right side of the variation.

#### Note to the user

The information contained in this sheet is based on the knowledge available from us at the date of the latest version. The user must make sure of the suitability and completeness of the information in relation to the specific use of the product. This document must not be interpreted as a guarantee of any specific property of the product. Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force concerning hygiene and safety under his own responsibility. No liability is assumed for improper use.