SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code: 72383600.
Name: Cartridge 9X17 (380) - RED EXTRA STRONG.

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

Description/Use: Small Caliber Ammunition
Uses advised against: 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: info@fiocchi.com

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)

Fiocchi 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.

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.

Lead Styphnate: REACH registration number 01-2119543737-30-0001
Tetrazene: REACH registration number 01-2120767928-32-0004

Hazard Pictograms:

GHS01

Hazard statements:
H204 Fire or projection hazard

Prevention precautionary statements

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.

2.3. Other hazards
Based on the available data, the product does not contain PBT or vPvB substances in percentage higher than 0.1%.
It contains: Lead styphnate and metallic massive lead, two substances in Candidate List.

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.

				Classification		
INDEX Number	**Substance identification data**	**EC Number**	**CAS Number**	**Class codes and hazard category**	**Hazard Identification Codes**	**Percentage in the mixture**
	Nitrocellulose	682-719-5	9004-70-0	Expl. 1.1	H201	Max. 87%
603-034-00-X	Nitroglycerine	200-240-8	55-63-0	Unst. Expl. Acute Tox 2 Acute Tox 1 Acute Tox 2 STOT RE 2 Aquatic Chronic 2	H200 H300 H310 H330 H373 H411	Max. 51%
612-026-00-5	Diphenylamine	204-539-4	122-39-4	Acute Tox 3 Acute Tox 3 Acute Tox 3 STOT RE 2 Aquatic Acute 1 Aquatic Chronic 1	H301 H311 H331 H373 H400 H410	Max. 1.5%

Article: Primer device
Mixture contained: Primer mixture.
Dangerous substances contained: See table below.

				Classification		
INDEX Number	**Substance identification data**	**EC Number**	**CAS Number**	**Class codes and hazard category**	**Hazard Identification Codes**	**Percentage in the mixture**
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 H360	25% ÷ 45%
603-035-00-5	PETN	201-084-3	78-11-5	Unst. Expl.	H200	0% ÷ 6%
	Tetrazene	203-659-4	109-27-3	Unst. Expl.	H200	2% ÷ 6%
013-001-00-6	Aluminum (pyroforic)	231-072-3	7429-90-5	Flam. Sol. 1 Water-react. 2	H228 H261	0% ÷ 10%
	Antimony Sulfide	215-713-4	1345-04-6	Carc. 2 STOT RE.2	H351 H373	10% ÷ 20%
	Barium Nitrate	233-020-5	10022-31-8	Ox. Sol. 2 Acute Tox 3 Eye Irrit. 2 Acute Tox 4	H272 H301 H319 H332	30% ÷ 55%

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_x) 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_x).
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_2.
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 vapors and gases may be released.
CO, CO_2, nitrogen oxides (NO_X) and heavy metals can be produced.

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 people 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 wastewater conductors. Collect the product manually with spark-proof tools and place it in properly labelled 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Normative requirements

BGR	България	Мминистерство на труда и социалната политика министерство на здравеопазването наредба No 13 от зо декември 2003 г
CZE	Česká Republika	Nařízeni vlády č. 361/2007 Sb. kterým se stanovi podmínky ochrany zdravi při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT – Limites de exposicion professional para agentes quimicos en España 2015
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustmise 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 poduzetnišva
HUN	Magyarorszàg	50/2011. (XII.22.) NGM rendelet a munkahelyek kémiai biztonságárol
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	Ķīmiķo vielu aroda eķspozīcijas robežvērtības [AER] darba vides gaisā 2012.
NLD	Nederland	Databank of the Social and Economic Concil of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning I arbeidsatmosfære
SVK	Slovnsko	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, propellant and projectile:

Hazardous components	CAS Number	TLV – TWA (8 hours)
Lead and its compounds	7439-92-1	0.05 mg/m^3
Aluminum (pyroforic powder)	7429-90-5	1 mg/m^3
Diphenylamine	122-39-4	10 mg/m^3
Barium nitrate	7757-79-1	Not detected
Nitrocellulose (N > 12,6%)	9004-70-0	Not detected
Nitroglycerine	55-63-0	0,46 mg/m^3 (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.

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_2 and nitrogen oxide (NO_X), heavy metal oxides (Pb, Ba, Sb) and sulfur dioxide (SO_2).
In the event of fire, toxic and irritating vapors and fumes containing LEAD may be generated.

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 dw	
Organism	**Exposure duration**	**Pb concentration**
Short–term toxicity to fish	49 d	LC50: 280,2 µg/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

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 l
Toxicity to aquatic plants other than algae	No data available	
Toxicity to microorganisms	3 h	EC50: 1 g/l

Aluminum

PNEC

Environmental compartment	Al concentration	
Freshwater	No hazard identified	
Marine water	No hazard identified	
Sewage treatment plant (STP)	No hazard identified	
Sediment (freshwater)	Insufficient data available (further information necessary)	
Sediment (marine water)	Insufficient data available (further information necessary)	
Hazard for Terrestrial Organism	Insufficient data available (further information necessary)	
Hazard for Predators: Secondary poisoning	Insufficient data available (further information necessary)	
Organism	**Exposure duration**	**Al concentration**
Short–term toxicity to fish	16 d	LC50: 430÷3910 µg/l
Long–term toxicity to fish	60 d	NOEC: 88÷350 µg/l
Short–term toxicity to aquatic invertebrates	4 d	LC50: 22÷ 30,6 mg/l
Long–term toxicity to aquatic invertebrates	42 d	NOEC: 232,6÷453,8 ìg/l
Toxicity to aquatic algae and cyanobacteria	72 h	EC50: 19,9÷4980 µg/l l
Toxicity to aquatic plants other than algae	7 d	EC50: 8,643÷15,966 mg/l
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	

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	

Diphenylamine

PNEC

Environmental compartment	DPA concentrazion	
Freshwater	No data available	
Marine water	No data available	
Sewage treatment plant (STP)	No data available	
Sediment (freshwater)	No data available	
Sediment (marine water)	No data available	
Hazard for Terrestrial Organism	No data available	
Hazard for Predators: Secondary poisoning	No data available	
Organism	**Exposure duration**	**DPA concentration**
Short–term toxicity to fish	No data available	
Long–term toxicity to fish	No data available	
Short–term toxicity to aquatic invertebrates	48 h	LC50: 2 mg/l
Long–term toxicity to aquatic invertebrates	No data available	
Toxicity to aquatic algae and cyanobacteria	72 h	EC50: 2,17 mg/l
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.

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.
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
0014

14.2. UN proper shipping name
Blank Cartridges

14.3. Transport hazard class(es)
Class: 1
Division: 1.4
Compatibility Group: S

14.4. Packing group
Class: 1
Division: 0014
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: 0014
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 and1.6L

IMDG
Class: 1
Division: 1.4
Compatibility Group: S
UN Number: 0014
Page: 1233

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 of the finished product: P1b

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
Lead Styphnate N° CAS: 15245-44-0 Some uses of this substance are restricted under Annex XVII of REACH

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:
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.

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.

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.

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.
H228	Flammable solid.
H261	In contact with water releases flammable gas
H272	May intensify fire; oxidizer.
H300	Fatal if swallowed.
H301	Toxic 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.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
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:

P1b	Explosive division 1.4

Class codes and hazard categories:

Acute Tox. 1,2,3,4	Acute toxicity, category 1,2,3,4.
Aquatic Acute 1	Acute aquatic hazard, acute 1
Aquatic Chronic 1,2	Long-term aquatic hazard chronic toxicity, category chronic 1,2.
Carc. 2	Carcinogenicity, category 2
Expl. 1.1	Explosive, division 1.1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2A
Flam. Sol. 1	Flammable solid, category 1
Ox. Sol. 2	Oxidising solids, category 2
Repr. 1A	Reproductive toxicity, category 1A
STOT RE 2	Specific target organ toxicity, repeated exposure, category 2
Unst. Expl.	Unstable Explosive
Water React. 2	Substance or mixture which in contact with water emits flammable gas, category 2

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, bio accumulable, 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 trasport des marchandieses 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 bio accumulable 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 – 10th Edition
15. Handling Chemical safety
16. INRS – Fiche Toxilogique (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

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.