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1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **Rimfire cartridges, cal. 22 (type SHORT, type LONG RIFLE), cartridges - Flobert, 22 WMR, 17 HMR**

1.2 Relevant identified uses of the product

Sports and training ammunition or ammunition for hunting small animals or vermin.

1.3. Identification of the manufacturer

Sellier & Bellot a.s.

Lidická 667

258 01 Vlašim

Czech Republic

Phone: +420 317 891 111

Contact to responsible persons for this MSDS: kremlova@sellier-bellot.cz
kratochvil@sellier-bellot.cz

1.4. Emergency telephone number

National advisory body: You can consult first aid details with the Toxicological information centre (TIS): Klinika nemocí z povolání (Department of occupational diseases), Na Bojišti 1, 128 08 Prague 2, phone: 224 919 293 or 224 915 402. Non-stop poison emergency line.

2. Hazards identification

According to Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council the cartridges are considered to be an article comprising these components:

- cartridge case: brass or brass plated steel
- NEROXIN priming composition (mixture of lead styphnate, tetrazene, barium nitrate, calcium silicide, lead oxides and other components) pressed in the edge of the case bottom
- propellant: smokeless powder.

The 6 mm Flobert ME cartridge does not contain propellant.

Under recommended conditions of storage, handling and use, the substances are not intended to be released in accordance with Article 7 par. 1 b) of the REACH Regulation.

2.1 Classification of the product

According to Regulation (EC) No 1272/2008 (CLP):

| | |
|------------------|--|
| Hazard class: | Article containing an explosive |
| Hazard category: | Division 1.4 |
| Code: | Expl. 1.4 |

2.2. Label elements

According to Regulation (EC) No 1272/2008:



Hazard pictograms:

Signal word:

Hazard statements:

Precautionary statements:

WARNING

H 204 Fire or projection hazard.

P 210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

2.3. Other hazards

The product does not fulfill the criteria for classification as PBT or vPvB.

The product contain SVHC substances – for more information refer to Section 3.1. The raw materials used for its production fulfill the requirements of REACH.

Risk of explosion may be caused by fire, by a spark, flame or other sources of ignition (e.g. static electricity, mechanical/electrical device).

In case of accidental fire, the individual cartridges are activated without the transition to mass explosion (collective explosion). Spray of individual cartridge elements with low weight may occur, which can cause eye damage or burn unprotected skin.

Potential effects on human health in case of fire (or after firing):

- no acute effect is known during normal handling
- skin contact - can cause allergic reaction in sensitive individuals
- eye contact - combustion gases (smoke) may irritate the eyes, cause eye redness and lacrimation
- inhalation - inhalation of combustion gases may cause irritation of the nose, larynx, upper respiratory tract and lungs; Irritation may lead to bronchitis, headache, lowering of blood pressure and general weakness
- ingestion - absorption may cause strong headache, nausea, vomiting, abdominal pain, fatigue, diarrhoea, tremor, ringing in the ears and salivation

Disassembly of cartridges is prohibited.

Used materials (chemical substances and mixtures) classified as hazardous according to CLP are specified in Sections 3.1 and 3.2, including their weight percentage of individual chemicals contained in the components.

3. Composition/information on ingredients

3.1 Mixture - priming composition, integral part of the cartridge

| Chemical substance | CAS No. | EC No. | % in the priming composition | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--|------------|-----------|------------------------------|---|
| lead styphnate (2,4,6-trinitrobenzene-1,3-diolate) | 15245-44-0 | 239-290-0 | 36 - 50 | Expl. H 201 Repr. 1A; H360 - Df Acute Tox. 4; H332 Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic1; H410 |
| tetrazene | 31330-63-9 | | 3.5 - 7 | Expl. H 201 Eye Irrit. 2; H319 Skin Irrit. 2; H315 Acute Tox. 4; H302 Acute Tox. 4; H332 |
| antimony trisulfide | 1345-04-6 | 215-713-4 | 0 - 10 | Acute Tox. 4; H332 Acute Tox. 4; H302 Aquatic Chronic 2; H411 |
| barium nitrate | 10022-31-8 | 233-020-5 | 17 - 30 | Ox. Sol. 2; H272 Acute Tox. 4; H302 Acute Tox. 4; H332 |
| lead dioxide | 1309-60-0 | 215-174-5 | 0.5 - 8 | Ox. Sol. 3; H272 Repr. 1A; H360 - Df Acute Tox. 4; H332 Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic1; H410 |
| lead(II,IV) oxide | 1314-41-6 | 215-235-6 | 0 - 0.5 | Ox. Sol. 3; H272 Repr. 1A; H360 - Df Acute Tox. 4; H332 Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic1; H410 |
| penthrite | 05/11/1978 | 201-084-3 | 0 - 7.8 | Expl.1.1, H 201 |
| smokeless propellant | - | - | 0 - 27 | Expl.1.3, H 203 Aquatic Chronic 3; H412 |

Cartridges contain the priming composition substance 2,4,6-trinitrobenzene-1,3-dioxide, lead (lead styphnate, CAS No. 15245-44-0). In some types of cartridges the amount exceeds 0.1 % of the total weight of the cartridges.

Further cartridges contain the priming composition substance lead(II,IV) oxide, CAS No. 1314-41-6. The amount does not exceeds 0.1 % of the total weight of the cartridges.

These above-mentioned substances are included in the "Candidate List of Substances of Very High Concern" (issued by the European Chemicals Agency).

3.2 Mixture - Propellant, integral part of the cartridge

| Chemical substance | CAS No. | EC No. | max .% Propellant | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--------------------|-----------|-----------|-------------------|---|
| nitrocellulose | 9004-70-0 | 215-174-5 | 98 | Expl. 1.1; H201 |
| nitroglycerine | 55-63-0 | 200-240-8 | 51 | Ox. Sol. 3; H272 Repr. 1A; H360 - Df Acute Tox. 4; H332 Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic1; H410 |
| centralite I | 85-98-3 | 201-645-2 | 8 | Acute Tox. 4; H302 Aquatic Chronic 3; H412 |
| diphenylamine | 122-39-4 | 1.5 | 1.5 | Acute Tox. 3; H301+H311+H331 STOT RE 2; H373 Aquatic Chronic1; H410 |
| ethyl acetate | 141-78-6 | 205-500-4 | 1.2 | Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 |

For full wording of H and EUH phrases refer to Section 16.

4. First aid measures

Under recommended way of use, the cartridges pose no health hazard. First aid may be necessary when substances are accidentally released from cartridges, e.g. during disassembly.

Small amount of breathable, harmful particles can form during firing.

Inhalation:

The following symptoms may develop: unconsciousness, vomiting, cardiac dysrhythmia, headache, convulsions, blurred vision, nausea.

Interrupt exposure, remove the affected person to fresh air. In case of unconsciousness, start resuscitating (cardiopulmonary resuscitation) and seek medical advice.

Skin contact:

Remove contaminated clothing and wash thoroughly with soap and water (lukewarm if possible). Do not use solvents or thinners. If the problems persist, seek medical attention.

Eye contact:

Flush eyes with a gentle stream of water for at least 15 minutes. Use your thumb and index finger to hold eyelids wide open. Remove contact lenses, if present and easy to do before flushing. Seek specialized medical attention.

Ingestion:

Rinse mouth with fresh water, drink ca. 0.2-0.3 l of water (lukewarm if possible) with a spoon of liquid soap and powder or crushed activated charcoal corresponding to ca. 5 tablets. Induce vomiting within one hour from ingestion. Do not induce vomiting during unconsciousness, convulsions or general bad state.

Administer activated charcoal regardless of whether vomiting was induced or not. Seek medical attention.

5. Firefighting measures

5.1. Extinguishing media

Water spray, extinguishing powder, foam, CO₂ or just soil.

5.2. Special hazards arising from the substance or mixture

Toxic substances may be released during combustion - nitrogen oxides and carbon oxides and metal oxides.

In case of fire, **the individual cartridges are activated without transition to mass explosion (collective explosion)**. As a spray of individual cartridge elements with low weight may occur, fire should be extinguished from a safe distance (at least 5 metres), protective clothing and eye and hearing protection must be used. Prevent movement of unauthorized persons in the vicinity of fire. During transport the crew must not try to extinguish fire of the load (transported cartridges). There is a risk of eye damage or burns to unprotected skin.

5.3. Advice for firefighters

Use fireproof turnout gear with face shield (e.g. OL 2 type), self-contained breathing apparatus (or respirator).

Fire characteristics of materials

NEROXIN priming composition ignition temperature 260-270 °C

Propellant: flash point – 140 °C

ignition temperature – 135 °C

Inserts (plastic, cardboard): burn when ignited.

Packaging (cardboard, layered cardboard): packaging must be protected from sources of heat with temperature exceeding 100 °C during storage, ignition temperature 427 °C.

6. Accidental release measures

6.1 Personal precautions

Prevent free movement of persons in the place of release. Prevent contact of spilled priming compositions and propellants with open fire, electric sparks and chemically aggressive substances.

Personal Care after Exposure : There are no medical conditions known to be aggravated by exposure to this product in solid form.

6.2. Environmental precautions

Avoid contamination of soil and water with priming compositions and propellants. Do not throw cartridges or their parts into the sewer.

6.3. Methods and material for containment and cleaning up

Sweep up the spilled priming compositions, propellants or parts of cartridges carefully and place them into leakproof packages as waste (this waste is considered a dangerous article and must be handled according to ADR, including the used package), do not raise dust, ventilate the area. Dispose of waste

at an approved waste disposal facility in accordance with applicable regulations. Prevent release into the sewer and the environment. Use tools made of non-sparking materials.

6.4 Reference to other sections

For more information refer to Section 13.

7. Handling and storage

7.1. Precautions for safe handling

Handle cartridges according to regulations for use of ammunition. The users must be made familiar with these regulations. There is no danger during normal handling. Do not eat, drink, smoke or use open fire when handling cartridges. The cartridges must be protected from the effects of radiating heat and mechanical or electrical sparks. The cartridges may not be exposed to impact or mechanical friction. **It is prohibited to disassemble, modify or rough-handle the cartridges!**

Wash your hands with lukewarm water and soap after work and especially before eating, it is recommended that you use protective hand cream after washing.

7.2. Conditions for safe storage

The cartridges must be stored in their original packaging in dry, clean and ventilated storerooms and they must be protected against weather effects, soil moisture, radiating heat of heating elements and against direct sunshine. They may not be exposed to mechanical impacts. Relative air humidity in storerooms must not exceed 60 %, air temperature must be between 5 °C and 30 °C. The cartridges must be placed so that safety requirements according to applicable regulations are met.

7.3. Specific end uses

Using only to authorized users.

Cartridges that have not been initiated may not be handed over for disposal to an unauthorised person. Proceed according to regulations on the use and disposal of ammunition.

8. Exposure controls/personal protection

8.1 Recommended exposure limits for professional use

| Chemical substance | CAS No. | EC No. | PEL(mg/m3) | NPK-P (mg/m3) | legislation |
|--------------------|----------|-----------|------------|---------------|---|
| carbon oxide | 630-08-0 | 211-128-3 | 30 | 150 | Government decree No. 361/2007 Coll. (Czech Republic) |
| carbon dioxide | 124-38-9 | 204-696-9 | 9000 | 45000 | Government decree No. 361/2007 Coll. (Czech Republic) |
| dust | | | 10 | 150 | Government decree No. 361/2007 Coll. (Czech Republic) |

Exposure limits of individual substances are specified in national regulations of the Czech Republic.

Exposure limits for individual substances contained in the priming composition and propellant are specified in the national regulations.
Under recommended way of use, these substances are not released or their quantity is insignificant.

8.2. Exposure controls

Engineering controls

Sealing, local exhaustion, ventilation.

Personal protection

Hand protection - it is recommended that you wear gloves during long-term handling of cartridges.

Body protection - work clothing.

Other - do not eat, drink, smoke or use open fire when handling cartridges. Observe personal hygiene principles. Eye protection and hearing protection is recommended during shooting. In case of high concentration of smoke, it is recommended that you use an approved respirator.

Store the cartridges away from ignition sources.

9. Physical and chemical properties

| | |
|---------------------|----------------|
| Appearance | compact whole |
| Form | solid |
| Odour | no |
| Specific weight | not applicable |
| Bulk density | not applicable |
| Boiling point | not applicable |
| Melting point | not applicable |
| Vapour density | not applicable |
| Evaporation rate | not applicable |
| Solubility in water | not applicable |
| pH | not applicable |

10. Stability and reactivity

10.1 Reactivity

Article containing an explosive .The product is stable under normal conditions of use (pressure, temperature).

10.2 Chemical stability

The product is stable under normal conditions of use.

10.3 Possibility of hazardous reactions

No data.

10.4 Conditions to avoid

Rough handling, effects of intense radiating heat, flame, mechanical or electrical sparks, static electricity and effects of impact or friction.

10.5 Incompatible materials

Chemically aggressive acidic or alkaline substances and strong oxidizing agents.

10.6 Hazardous decomposition products

Irritating gases and aerosols – CO, CO₂, NO_x, and metal oxides – may be released during combustion.

11. Toxicological information

Not available.

Hazardous substances contained in the product may be harmful, however, as they are encapsulated in the product, their releasing is not expected under normal conditions of use.

It is prohibited to disassemble the cartridges.

12. Ecological information

Not available.

Hazardous substances contained in the product may be harmful to the environment, however, as they are encapsulated in the product, their releasing into the environment is not expected under normal conditions of use.

13. Disposal considerations

13.1. Waste treatment method

Cartridges and their waste parts are considered dangerous articles. The user of this product is responsible for using this product and handling its remnants (waste) and the packaging. Proceed in compliance with all relevant local and national regulations and laws in respect to handling and storage of the products and their waste.

Non-contaminated packaging and initiated cases (after initiation cartridges) are not considered hazardous waste and can be recycled.
 Cases that have not been initiated may not be handed over for disposal to an unauthorised person.
 Proceed according to regulations on the use and disposal of ammunition.

14. Transport information

Transport by road and rail (ADR/RID)

| | |
|----------------------|--|
| Classification | 1.4 S |
| UN No. | UN 0012 |
| Official designation | CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE) |
| Safety label | no. 1.4 |
| Packaging group | not applicable (packaging must meet requirements for packaging group II) |

Remark: Cartridges may be transported in accordance with 1.1.3.6 ADR – Exemptions related to quantities carried per transport unit.

Transport by inland waterways and sea (ADN/IMDG-Code)

| | |
|----------------------|--|
| Classification | 1.4 S |
| U No. | UN 0012 |
| Official designation | CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE) |
| Safety label | no. 1.4 |
| Packaging group | not applicable (packaging must meet requirements for packaging group II) |

Transport by air (ICAO/IATA-DGR)

| | |
|------------------------|--|
| Classification | 1.4 S |
| N No. | UN 0012 |
| Official designation | CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE) |
| Safety label | no. 1.4 |
| Packaging instructions | PGI 130 |
| Packaging group | not applicable (packaging must meet requirements for packaging group II) |

Remark: Transport packaging up to 25 kg net weight can be transported by personal air transport and up to 100 kg net weight can be transported by freight air transport.

15. Regulatory information

15.1 Safety, health and environmental regulations

EU legislation:

REACH regulation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended

CLP regulation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

Dangerous Substances Directive 67/548/EEC

Dangerous Preparations Directive 1999/45/EC

Legislation in the Czech Republic:

Government Decree No. 361/2007 Coll., laying down conditions for the protection of employees' health at work, as amended

Act No. 258/2000 Coll., on public health protection, as amended

Act No. 262/2006 Coll., the labour code, as amended

Act No. 201/2012 Coll., on air pollution, as amended

Act No. 350/2011 Coll., on chemical substances and chemical compositions

Decree of the Ministry of Interior No. 246/2001, Coll., on fire prevention and related legal provisions, as amended

Act No. 119/2002 Coll., on firearms and ammunition, as amended

Statement of the Ministry of Foreign Affairs of the Czech Republic No. 8/2013 Collection of International Treaties, The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), as amended

15.2 Chemical Safety Assessment

Has not been done.

16. Other information

H statements used in Section 3.1 and 3.2:

Classification according to Regulation (EC) No 1272/2008 (CLP):

| | |
|-------|-------------------------------------|
| H 201 | Explosive; mass explosion hazard. |
| H 225 | Highly flammable liquid and vapour. |
| H 272 | May intensify fire; oxidiser. |
| H 301 | Toxic if swallowed. |
| H 302 | Harmful if swallowed. |
| H 311 | Toxic in contact with skin. |
| H 315 | Causes skin irritation. |
| H 319 | Causes serious eye irritation. |
| H 331 | Toxic if inhaled. |
| H 332 | Harmful if inhaled. |
| H 336 | May cause drowsiness or dizziness. |

- H 373 May cause damage to organs.
- H 400 Very toxic to aquatic life.
- H 410 Very toxic to aquatic life with long lasting effects.
- H 411 Toxic to aquatic life with long lasting effects.
- H 412 Harmful to aquatic life with long lasting effects.
- H 360-Df May damage fertility or the unborn child.

The information provided in this MSDS is based on our current knowledge and experience. It describes the product with the focus on safe handling of the product - its use, storage, handling and disposal, and cannot be considered guaranteed values. The user is responsible for compliance with valid laws and regulations when using our products.