

Date of issue: 01/09/2014  
Date of revision: 05/10/2015

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

### **1.1 Product identifier**

Trade name: **Shotgun shells**

### **1.2 Relevant identified uses of the product**

Ammunition for sports and hunting purposes.

### **1.3 Producer Identification**

**Sellier & Bellot a.s.**

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[kratochvil@sellier-bellot.cz](mailto: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**

Shotgun shells (further only shotshells) are considered articles according to Article 3 of Regulation (EC) No. 1907/2006 of the European Parliament and the Council (REACH). The following dangerous mixtures inside the shotshell form its inseparable part:

- priming composition pressed into the primer. Hazardous substances in the mixture specified in Section 3.1.
- propellant. Hazardous substances in the mixture specified in Section 3.2.

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

Accidental fire may result in activation of individual shotshells and spray of individual shotshell elements (e.g. pieces of cases, shots, primer cups) with low weight and energy, which can cause eye damage or local burns to 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

It is prohibited to disassemble the shotshells.

## **3. Composition/information on ingredients**

The shotshells comprise the following basic parts (elements):

- case: polyethylene or paper with head (head - brass plated steel) and plastic bottom with base wad (polyethylene)
- primer: brass cup (anvil, battery cup, cover discs) filled with priming composition, composition - for hazardous substances refer to Section 3.1.
- plastic wad with shot protector (polyethylene) or felt wad

- propellant: mixture of nitrocellulose, nitroglycerine, diphenylamine, centralite I, ethyl acetate and other compounds, composition - for hazardous substances refer to Section 3.2.
- slug - shots: lead, steel, zinc or rubber
- some types have a lead slug, type SPECIAL SLUG, SPHERICAL BULLET
- special types have a slug from powder-metal, from inert material and tea mixture
- over-shot wad: polyethylene or paper

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

**3.1 Composition pressed into the primer (priming composition), integral part of the shotshell:**

Chemical substance	CAS No.	EC No.	max. % in the composition	Classification according to Regulation (EC) No 1272/2008 (CLP)
lead styphnate	15245-44-0	239-290-0	50	Expl. 1.1; H201 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		6	Expl. 1.1; H201 Eye Irrit. 2; H319 Skin Irrit. 2; H315 Acute Tox. 4; H302 Acute Tox. 4; H332
antimony trisulfide	1345-04-6	215-713-4	20	Acute Tox. 4; H332 Acute Tox. 4; H302 Aquatic Chronic 2; H411
barium nitrate	10022-31-8	233-020-5	40	Ox. Sol. 2; H272 Acute Tox. 4; H302 Acute Tox. 4; H332

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

The substance is 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 shotshell**

Chemical substance	CAS No.	EC No.	max. % Propellant	Classification according to Regulation (EC) No 1272/2008 (CLP)
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
nitrocellulose	9004-70-0	215-174-5	more than 70, remaining portion	Expl. 1.1; H201
diphenylamine	122-39-4	204-539-4	2	Acute Tox. 3; H301,H311,H331 STOT RE 2; H373 Aquatic Chronic1; H410
centralite I	85-98-3	201-645-2	6	Acute Tox. 4; H302 Aquatic Chronic 3; H412
ethyl acetate	141-78-6	205-500-4	less than 2	Flam. Liq. 2;H225 Eye Irrit. 2; H319 STOT SE 3; H336
2,4-dinitroanisole	119-27-7	204-310-9	0 - 4,0	Acute Tox.4; H302

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

## **4. First aid measures**

First aid may be necessary when substances are released from shotshells, e.g. during disposal of the individual components.

Under recommended way of use, the cartridges pose no health hazard.

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

**Inhalation:**

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, CO<sub>2</sub> 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 shotshells are activated without transition to mass explosion (collective explosion)**. As spray of individual shotshell 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 shotshells). 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) and hearing protection.

### **Fire characteristics of materials**

Priming composition: ignition temperature 260-270 °C

Propellant: flash point 140 °C,

ignition temperature 135 °C

Cases, protectors or wads 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 primers or priming compositions 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 shotgun shells compositions. Do not throw shotgun shells or their parts into the sewer.

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

Sweep up the spilled shotshells, primers, priming compositions or parts of primers 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 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 shotshells 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 shotshells. The shotshells must be protected from the effects of radiating heat and mechanical or electrical sparks. The shotshells may not be exposed to impact or mechanical friction. **It is prohibited to disassemble, modify or rough-handle the shotshells!**

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 shotshells 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. Shotshells must be stored so that safety requirements of applicable regulations are met.

**7.3 Specific end uses**

Using only to authorized users.

Shotshells 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	9,000	45,000	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 shotshells.

Body protection - work clothing.

Eye and ear protection - use safety glasses and hearing protection in case of explosion.

Other - do not eat, drink, smoke or use open fire when handling shotshells . Observe personal hygiene principles.

## **9. Physical and chemical properties**

Appearance	compact whole consisting of the shotshell and other components
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, CO<sub>2</sub>, NO<sub>x</sub>, 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 shotshells.

**12. Ecological information**

Not available.

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

It is prohibited to disassemble the shotshells.

**13. Disposal considerations****13.1. Waste treatment method**

Shotshells and 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 shotshells (cases) are not considered dangerous 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)
<b>Remark:</b>	Shotshells 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
UN No.	UN 0012
Official designation	CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE)
Safety label	no. 1.4
Packaging group	not applicable (packagings must meet requirements for packaging group II)

**Transport by air (ICAO/IATA-DGR)**

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 instructions	PGI 130
Packaging group	not applicable (packagings 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 272	May intensify fire; oxidiser.
H 302	Harmful if swallowed.
H 315	Causes skin irritation.
H 319	Causes serious eye irritation.
H 332	Harmful if inhaled.
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 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.**