

TERMET

SAFETY DATA SHEET

SDS/FDS No.10

STUNBOLT GUN CARTRIDGES

1 Identification of the substance/mixture and of the company

1.1 Product identification

Stunbolt gun cartridges 6.80/11, Pyrotechnic articles intended for slaughterhouse tools.

- Yellow cartridges, box of 500 u: ref 4833
- Red cartridges, box of 500 u: ref 589
- Black cartridges, box of 500 u: ref 1563

1.2 Pertinent uses identified for the substance or mixture and uses advised against

These items are intended solely for use in slaughterhouse tools.

1.3 Information on the supplier of the safety data sheet

TERMET SOLEFI
ZA LA FORET
F72470 CHAMPAGNE
France

Tel: +33 (0) 2 43 54 10 30
Fax: +33 (0) 2 43 89 90 75

Contact: commercial@termet.fr

1.4 Emergency phone number

TERMET: +33 (0)2 43 54 10 30 / +33 (0)6 80 32 76 29
ORFILA (INRS): +33 (0)1 45 42 59 59

2 Identification of hazards

Stunbolt gun cartridges contain a mixture of explosive materials and present a risk of explosion if the casing is opened.

2.1 Classification of the substance and mixture

Pyrotechnic articles 1.4S

Hazard statement:

- H204: Fire or projection hazard.

Precautionary statements:

- P210: Keep away from heat, sparks, open flame, hot surfaces. – No smoking.
- P240: Ground/bond container and receiving equipment.
- P250: Do not subject to grinding/shock/.../friction.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P370+380: In case of fire: Evacuate area.
- P401: Store in accordance with national and regional rules and regulations.
- P501: Dispose of contents/container in accordance with national and regional rules and regulations.



2.2 Labelling

Pursuant to Regulation (EC) No. 1272/2008, explosives that are marketed with a view to producing an explosive or pyrotechnic effect may deviate from the classification, labelling and packaging (CLP) requirements.

Symbol:



Signal word: Caution

2.3 Other hazards

- Risk of uncontrolled operation in case of fire, exposure to heat, electrostatic discharge, impact.
- Risk of dangerous projectiles, high velocity gas emissions released during operation.
- Risk of burning if in direct contact with elements heated by the operation of the article or by reaction products (gas particles).
- Risk of fire spreading if elements heated by the operation of the article or reaction products come into contact with flammable materials.
- Risk of irritation to eyes and respiratory tract from reaction products during operation.
- Risk of trauma from high-volume sound blast during operation.

3 Composition / information on components

Stunbolt gun cartridges intended for slaughterhouse tools include pyrotechnic components that are hermetically sealed. Under normal or reasonably predictable use conditions, the components will not be released, including during disposal of the article. The cartridges should not be opened.

- Packaging: 1 box of 500 cartridges
- Composition of casing: 646 to 686 mg per cartridge
- Composition of primer: 20 to 30 mg per cartridge
- Composition of propellant: 200 to 300mg per cartridge.

3.1 Substances

Not applicable.

3.2 Mixtures

In the event of damaged cartridges (opened, crushed, etc.) or accidental spillage of pyrotechnic substances and mixtures, see paragraph 6.3.

The following information is provided for indicative purposes only:

Composition of cartridge casing: annealed copper clad steel

Chemical characteristics:

C: 0.03 to 0.07%

Mn: 0.20 to 0.35%

P ≤ 0.02%

Surface treatment: 1.5 micron copper electro-galvanisation on inside and outside faces.

Composition of the cartridge: if necessary, see Autoliv safety data sheet No.22.



4 First aid

4.1 Description of first aid

In case of exposure to components or combustion products, follow the advice below:

- INHALATION: If symptoms of pulmonary irritation (coughing, wheezing, difficulty breathing), remove from exposure area and immediately into fresh air. Keep the affected person warm and at rest. Obtain medical assistance.
- EYE CONTACT: Flush eyes with water for at least 15 minutes. If irritation, see a doctor immediately.
- SKIN CONTACT: Wash with soap and water, see a doctor.
- INGESTION: See a doctor.
- BURN: Cool the skin with water as long as possible, see a doctor.

4.2 Main acute and deferred symptoms and effects

Due to the physical nature of the product, absorption is unlikely regardless of the type of exposure.

4.3 Indication of immediate medical care and special treatments necessary

Not applicable.

5 Fire-fighting

5.1 Extinguishing media

Recommended extinguishing media: water, powder, foam, carbon monoxide, sand.
Extinguishing methods not recommended for safety reasons: none.

5.2 Special hazards resulting from the substance or mixture

In the event of fire, the pyrotechnic articles may fire. There is a risk of injury caused by dangerous projectiles and blast if they fire.

Combustion gases may contain chlorine derivatives or nitrate derivatives or carbon monoxide.

Even after the fire, consider the articles as still active. See sections 6 and 13 for disposal instructions.

5.3 Advice for fire fighters

Extinguish the fire while maintaining a safe distance. Risk of projection.

IN THE CASE OF FIRE NEAR STORAGE OR NEAR TRANSPORT VEHICLES, spray water on the containers and on the storage area to prevent fire from spreading.

IF STORAGE AREA OR TRANSPORT VEHICLE IS ON FIRE, do not extinguish. Evacuate the area, including the emergency intervention team, to beyond a 25 m radius.



6 Accidental spill

6.1 Personal precautions, protective equipment and emergency procedures

For protective equipment see section 8.2

6.2 Precautions for environmental protection

Do not discard into trash bin.

6.3 Confinement and cleaning methods and materials

Unused cartridges should be collected to be disposed of and destroyed by a certified specialist.
Fired cartridges should be collected to be disposed of and destroyed by a certified specialist.
In the case of damaged cartridges (open, crushed, etc.) and /or spilled pyrotechnic substances or mixtures, dampen to reduce the reactivity of the products. Gather into a plastic container (in which case, cover with water), or wooden or cardboard container.

6.4 Reference to other sections

Not applicable.

7 Handling and storage

7.1 Precautions for safe handling

Only trained and qualified persons may handle and use pyrotechnic articles intended for stunbolt gun cartridges.
Personal Protective Equipment: see paragraph 8.2.

- Use only devices designed for the purpose (eg, captive bolt pistol or test device).
- Do not use cartridges that have been dropped or subjected to mechanical load.
- Do not try to open.
- Keep away from chemical products.
- Keep away from ignition sources.
- Take protective measures against electrostatic charges.
- Do not drill, solder, weld.
- Can become a dangerous projectile if ignited outside its intended application.

7.2 Safe storage conditions, including potential incompatibilities

- Follow the national and regional rules and regulations for storage.
- Store in a dry place in its original packaging in rooms specially provided for the purpose.
- Keep away from ignition sources.
- Take protective measures against electrostatic charges.

7.3 Special end use(s)

See section 1.2



8 Individual exposure/protection controls

8.1 Control parameters

Not applicable.

8.2 Exposure control

When handling the articles:

- Eye protection: safety glasses,
- Hand protection: normally unnecessary.

When operating the articles, for example for the purpose of testing them, or when handling an article that has not completely exploded:

If there is an accumulation of residue, use water to clean off. It is recommended that safety gloves and glasses be worn.

- Respiratory protection: Appropriate breathing protection should be worn if occupational exposure limits are exceeded (eg, for CO, NOX).
- Hand protection: Cotton or leather protective gloves.
- Ear protection: Wear hearing protectors when operating the articles.
- Eye protection: Safety glasses.
- Body protection: Cotton work clothing
- Health and protection measures: Do not inhale reaction products, avoid skin contact, flush affected skin with water. Do not eat or drink while handling.

The articles should be fired only in places and facilities specially provided for the purpose. Use an appropriate ventilation system.

9 Physical and chemical properties

9.1 Information on essential physical and chemical properties

The cartridge consists of a steel casing with 1.5µm-thick electroplated copper on inner and outer surfaces.

9.2 Other information

Appearance:	Solid – metal envelope
Auto-ignition temperature:	170 °C
Physical state:	Solid
Impact sensitivity:	112 g ball from 220 mm height
Minimum energy to fire in normal safety conditions:	0.25 J



10 Stability and reactivity:

10.1 Reactivity

When the stunbolt gun cartridge is handled and stored correctly (see section 7), there are no foreseeable hazardous reactions. The pyrotechnic articles are stable in the projected use conditions for handling and storage.

10.2 Chemical stability

See 10.1

10.3 Possibility of hazardous reactions

See 10.1

10.4 Conditions to avoid

Not applicable.

10.5 Incompatible materials

Acids, oxidants and strong alkalis.

10.6 Hazardous decomposition products

See AUTOLIV safety data sheet No.22 regarding composition of powder.

11 Toxicological information

POTENTIAL EXPOSURE PATHWAYS: The physical nature of this product makes any absorption unlikely, by any pathway. A small quantity of inhalable particles may be emitted at the time of firing.

ACUTE TOXICITY:

Oral LD50:	Not applicable to this product.
Inhalation LC50:	Not applicable to this product. The particles generated during firing may be toxic.
Irritation:	Causes no irritation to skin or eyes in cartridge form.

The ingredients are partially toxic.

11.1 Information on toxicological effects

See 11.0



12 Ecological information

12.1 Toxicity

No data available on this product.

12.2 Persistence and degradability

It is important to collect the cartridges and not let them litter the environment. See AUTOLIV safety data sheet No.22.

12.3 Bioaccumulation potential

No data available.

12.4 Mobility in soil

It is important to collect the cartridges and not let them litter the environment. See AUTOLIV safety data sheet No.22.

12.5 Results of PBT and vPvB assessments

Not applicable.

12.6 Other harmful effects

Not applicable.

13 Disposal considerations

13.1 Waste treatment methods

Articles that have misfired or that have only partially fired can only be disposed of by specialist certified companies in accordance with the applicable rules and regulations (see also section 7 "Handling and storage").

Waste code: 16 04 03* Other explosive waste.

- Cartridges that have misfired or only partially fired should not be discarded into a trash bin.
- All damaged stunbolt gun cartridges should be treated as unfired.
- Only stunbolt gun cartridges that have completely fired may be used for recycling.



14 Transport information:

14.1 UN Number

UN 0014

14.2 United Nations shipping name

UN name: Stunbolt gun cartridges – pyrotechnic articles (Cartridges for weapons, blank or Cartridges, small arms, blank)

14.3 Transport hazard class

Boxes or 500 cartridges are grouped into approved 1.4S cardboard boxes



14.4 Packaging group

	By land: RID & ADR	By sea: IMDG	By air: IATA	AND/ADNR
Shipping name	Stunbolt gun cartridges			
Hazard class and compatibility group	1.4 S			
UN No.	0014			
Packaging group	II (packaging instruction P 134)			
Hazard label / sign	Explosive 1.4 S			
Packaging	Min quantity: 20 boxes of 500 cartridges, gross weight 10 kg, active material weight 2.5 kg Max quantity: 30 boxes of 500 cartridges, gross weight 15 kg, active material weight 3.75 kg			

14.5 Dangers to the environment

Not applicable – See 12.3.

14.6 Special precautions to be taken by the user

Not applicable.

14.7 Bulk transport in accordance with Annex II of the Marpol 73/78 Convention and the IBC Code

Not applicable.



15 Regulatory information:

15.1 Special regulations/laws governing the substance or mixture in terms of health, safety and the environment

FRENCH REGULATIONS

- Decree No. 2013-973 of 29 October 2013 on the prevention of special risks to which workers are exposed during pyrotechnic activities.

15.2 Chemical safety assessment

Not applicable.

16 Other information

Full text of the Hazard Phrases cited in sections 2 and 3:

- H204: Fire or projection hazard.

Other information:

The information in this sheet is based on the state of our knowledge of the product concerned at the time that the sheet was published. It is provided in good faith.

The user's attention is also drawn to the potential risks incurred when a product is used for purposes other than those for which it is designed. This sheet does not in any way release the user from the obligation to know and apply all regulations applicable to its activity. The user is solely responsible for taking the precautions relating to the use of the product. The regulations are mentioned simply to help the recipient fulfil the obligations incumbent on it when using the product.

The regulations and obligations mentioned in this sheet should not be considered exhaustive and do not release the recipient from compliance with other texts not mentioned in this sheet, concerning the possession and handling of the product for which it is solely responsible.