



Product name: **Bullets (Projectiles), Inert**

SDS N.º: 020 - Rev. 02

Date : March 26<sup>th</sup>, 2015

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## **1- IDENTIFICATION**

### **1.1 Product Identification**

Product Name : Inert Bullets (Projectiles) for Small Arms Cartridges  
Synonyms : Lead Bullets, Soft Points Bullets, Full Metal Jacket Bullets, Full Metal Case Bullets, Jacketed Hollow-Point Bullets, Full Encapsulated Bullets, Solid Copper Hollow Point Bullets, Ball Projectiles, Armor Piercing Projectiles.

**1.2- Product Use** : In Small Arms Cartridges

### **1.3 Manufacturer**

CBC - COMPANHIA BRASILEIRA DE CARTUCHOS

Av. Humberto de Campos, 3220

09426-900 – Ribeirão Pires - SP – Brazil

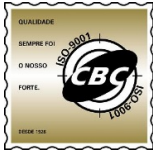
Phone : 55-11-2139-8200

Fax : 55-11-2139-8346

Emergency Response Number 24 Hours: 55-11-2139-8450

## **2- HAZARD IDENTIFICATION**

- Classification and labeling: Not hazardous


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### 3 - COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1- Lead Bullets

HAZARDOUS COMPONENT	CAS N° EC N°	CONCENTRATION RANGE IN CARTRIDGE
Lead	7439-92-1 231-100-4	90 – 100
Antimony	7440-36-0 231-146-5	0 – 10
Tin	7440-31-5 231-141-8	0 – 5

#### 3.2- Soft Point, Full Metal Jacket (Case), Jacketed Hollow Point and Full Encapsulated Bullets

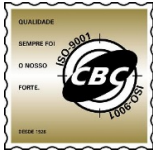
HAZARDOUS COMPONENT	CAS N° EC N°	CONCENTRATION RANGE IN CARTRIDGE
Jacket	Copper 7440-50-8 231-159-6	70 – 90
	Zinc 7440-66-6 231-175-3	10 - 30
Lead Core	Lead 7439-92-1 231-100-4	90 – 100
	Antimony 7439-92-1 231-100-4	0 - 10

#### 3.3- Solid Copper Hollow Point Bullets

HAZARDOUS COMPONENT	CAS N° EC N°	CONCENTRATION RANGE IN CARTRIDGE
Copper	7440-50-8 231-159-6	100

#### 3.4- Ball and Armor Piercing Projectiles

HAZARDOUS COMPONENT	CAS N° EC N°	CONCENTRATION RANGE IN CARTRIDGE
Jacket	Copper 7440-50-8 231-159-6	70 – 90
	Zinc 7440-66-6 231-175-3	30 – 10
Core	Lead 7439-92-1 231-100-4	90 – 100
	Antimony 7439-92-1 231-100-4	0 - 10
	Steel --x--	80 – 100



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## **4 FIRST-AID MEASURES**

**4.1 Inhalation:** If symptoms of lung irritation occur (coughing, or breathing difficulty), remove the person from area to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, apply oxygen. Call a physician.

**4.2 Ingestion:** Call a physician. Never induce vomiting in unconscious person.

**4.3 Eyes:** Immediately flush out fumes or particles with large quantity of water for at least 15 minutes. If eye irritation develops call a physician..

**4.4 Skin:** Wash with large quantity of soap and water.

### **4.5 Most important symptoms and effects, both acute and delayed**

The Inert Bullets (Projectiles) are manufactured with lead / antimony / tin alloys, copper / zinc alloys, copper, and copper / zinc, alloys / steel / lead and antimony alloys. Therefore under normal handling of the bullets (projectiles), no exposure to any harmful materials will occur.

### **4.6 Notes to physician:**

None know.

### **4.7 Exposure and Effects – Carcinogenicity**

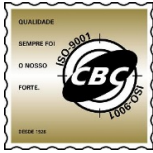
Contents not known to be carcinogenic.

### **4.8 Exposure and Effects - Comments**

Lead is a toxic metal, which may be released during firing of modern ammunition. Care should be taken in the cleaning of indoor shooting galleries ranges facilities to minimize the exposure potential to lead dust or fumes. Persons engaged in these activities should wear protective clothing with an appropriate respirator.

### **4.9 Aggravation of Pre-Existing Health Conditions**

None know.



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## **5 FIRE-FIGHTING MEASURES**

### **5.1 Unusual Fire and explosion data**

If fire reaches cargo do not fight. Evacuate all person, including emergency responders from the area for 50m in all directions.

### **5.2 Extinguishing Media**

Choose extinguishing media for surrounding materials.

### **5.3 Firefighting Procedures**

In case a fire, use normal fire fighting equipment. Response to this material requires the use of a self-contained breathing apparatus.

## **6 ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions**

Evacuate all person from the area for 50m in all directions.  
Use personal protective equipment as described in Section 8.

### **6.2 For staff is part of the emergency services**

Use standard firefighting equipment. With regard to protection, it must meet the physical characteristics of the product, such as a projection of metallic fragments from the detonation of cartridges and smoke and irritating fumes, why it is advisable to use gas masks.

### **6.3 Environmental precautions**

Not Applicable

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

Scrape up spilled material into a suitable container material, which can be plastic, buckets or cans bags. For disposal, proceed according to Section 13 of this SDS.

## **7 HANDLING AND STORAGE**

### **7.1 Precautions for safe handling:**

No special requirements.

### **7.2 Hygiene measures:**

Do not eat, drink or smoke while handling or using cartridges. Wash hands thoroughly after use.



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### 7.3 Storage:

No special requirements.

- Shelf life Limitations : Not know
- Incompatible Materials for Packaging : Not know
- Incompatible Materials for Storage or Transport : Acids, alkalies, ammonia and other corrosive materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Ingredients with limit values that require monitoring at the workplace:

Chemical Component	ACGIH TLV/ TWA mg/m <sup>3</sup>
Copper	0.2 (b) 1.0 (c)
Zinc	NE
Lead	0.05
Antimony	0.05
Tin	0.02
Steel	NE

NE: Not Established.  
 (a) - As fumes  
 (b) - As dusts

### 8.2. Engineering Controls

No special requirements.

### 8.3. Personal protective equipment

#### 8.3.1. Eyes / Face Protection:

Recommendable approved protective glasses.

#### 8.3.2. Skin and body Protection:

Not normally required.

#### 8.3.3. Respiratory Protection:

Not normally required. Use of approved respirator is recommended if the concentrations of fumes and/or dust exceed the TLV or PEL.



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## 9- PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Cilindrical body, with round, ogival or flat front part and cilindrical or boattail posterior part
Color	Lead bullets Soft point bullets Full Metal Jacket (Case) bullets, Jacketed Hollow Point and Full Encapsulated bullets Ball projectiles Armour Piercing projectiles
	Gray, red/gold metallic  Red/gold metallic or Silver colored if nickel plated  Red/gold metallic Red/gold metallic with black varnished point
Odor	: None
Odor Threshold	: Not Applicable
pH	: Not Applicable
Melting point/freezing point	: Not Applicable
Initial boiling point and boiling range	: Not Applicable
Flash point	: Not Applicable
Evaporation rate	: Not Applicable
Flammability (solid, gas)	: Not Applicable
Upper/lower flammability or explosive limits:	Not Applicable
Vapor Pressure	: Not Applicable
Vapor Density	: Not Applicable
Relative density	: Not Applicable
Solubility (ies)	: Insoluble
Partition coefficient: n-octanol/water	: Not Applicable
Auto-ignition temperature	: Not Applicable
Decomposition temperature	: Not Applicable
Viscosity	: Not Applicable



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## 10- STABILITY AND REACTIVITY

### 10.1 Reactivity

No reactive under normal use conditions.

### 10.2 Chemical stability

Stable under normal use conditions of temperature and pressure. Not react with water.

### 10.3 Possibility of hazardous reactions

No possibility of hazardous reactions

### 10.4 Conditions to avoid

Listed previously.

### 10.5 Incompatible materials

Acids, Alkalies, Ammonia, Strong Oxidizers, Caustics.

### 10.6 Hazardous decomposition products

Metal oxides, lead dust/fumes during firing. Metals from reaction with acids, may liberate hydrogen gas.

## 11- TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

POTENTIAL EXPOSURE ROUTES: The physical nature of this product makes absorption from any route unlikely.

#### 11.1.1 Acute animal toxicity data:

For Product:		For Components		
		Copper	Lead	Zinc
Oral LD50	Not applicable for product	3.5 mg/kg (mouse intraperitoneal)	No Data	No Data
Dermal LD50	Not applicable for product	375 mg/kg (rabbit, subcutaneous)	No Data	No Data
Inhalation LD50	Not applicable for product. Particles generated from firing may be slightly toxic	No Data	No Data	No Data
Irritation	Not a skin or eye irritant as a loaded round	Respiratory irritant	Eye irritant	Eye irritant



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### **11.1.2 Skin Corrosion/irritation**

Contact of skin with bullets presents no health hazard.

### **11.1.3 Serious eye damage/eye irritation**

None known or reported

### **11.1.4 Respiratory or skin sensitization**

Effects of respiratory or skin sensitization are not expected.

### **11.1.5 Germ cell mutagenicity**

This product is not known or reported to be mutagenic. Lead has been shown to be mutagenic in several in vitro assays.

### **11.1.6 Carcinogenicity**

The International Agency for Research on Cancer (IARC) lists lead as possibly carcinogenic to humans, group 2B.

### **11.1.7 Reproductive toxicity**

This product is not known or reported to cause reproductive or developmental effects. Lead (fumes of fired primer mixture) has been shown to affect fetal development including birth defects and reduce male reproductive function in laboratory animals.

### **11.1.8 Specific target organ toxicity - single exposure**

No data available.

### **11.1.9 Specific target organ toxicity - repeated exposure**

No data available.

### **11.1.10 Aspiration hazard**

No data available.

### **11.1.11 Additional Information**

None known or reported.

## **12- ECOLOGICAL INFORMATION**

### **12.1 Ecotoxicity:**

No data is available on this product. Individual components are as follows:

Copper: The toxicity of the copper to aquatic organisms varies not only with the species, but also with the physical and chemical characteristics of the water, such as the temperature, hardness, turbidity and carbon dioxide contents. Have been found for various investigators that concentration of the copper varying from 0,1 to 1,0 mg/l to be not toxic for most fishes. Concentrations of 0,015 to 3,0 mg/l have been reported as toxic,





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particularly in soft water to many kinds of fishes, crustaces, mollusks, insects and plankton.  
Lead: LC50 (48h) to bluegill (*lepomis macrochirus*) is reported to be 2- 5 mg/l. Lead toxic for water fowl.

Zinc: Concentrations of zinc greater than 0,13 mg/l have been reported as lethal to the fishes. The presence of copper appears to have a synergetic effect on the toxicity of zinc towards the fishes.

#### **12.2 Mobility:**

Dissolved lead from degraded bullets may migrate through soil.

#### **12.3 Persistence / Degradability:**

No biodegradable. Bullets (projectiles) may fragment and decompose in soil leading to accumulation of lead.

#### **12.4 Bioaccumulation:**

No data. No reporting is required if diameter of metal is equal or exceeds 100 micrometers (0.004 inches).

#### **12.5 Other adverse effects:**

No data available.

## **13- DISPOSAL CONSIDERATIONS**

#### **13.1 Product**

Care must be taken to prevent environmental contamination from use of this material. The user of the material is responsible to dispose residues, unused materials and containers in accordance with the Local, State and Federal laws and regulations regarding storage, treatment and disposal for hazardous and non hazardous wastes.

#### **13.2 Packing:**

Empty containers of cartridges (drawer, external box) must be destroyed and sent to collection.

#### **13.3 Other information:**

The user of this material has the responsibility to disposed the unused material, residues and containers in compliance with local, state and federal laws and regulations regarding treatment storage and non hazardous material.



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## 14- TRANSPORT INFORMATION

### 14.1 IATA – VIA AIR, IMDG – VIA SEA, VIA LAND

<b>Land:</b>	UN - “United Nations” Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations
<b>Sea:</b>	IMO – International Maritime Organization International Maritime Dangerous Goods Code (IMDG Code)
<b>Air:</b>	IATA - International Air Transport Association Dangerous Goods Regulation (DGR)
<b>UN number:</b>	Not classified as hazardous for transport in the different modals.

### 14.4 Special precautions for user

No data available.

## 15- REGULATORY INFORMATION

This Material Safety Data Sheet has been prepared in Compliance with:

- REACH regulation: Regulation (EC) N° 1907/2006 of the European Parliament of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended
- ST/SG/AC.10/1/Rev. 18th – Recommendations on the Transport of Dangerous Goods – Model Regulations
- IATA – “*Internacional Air Transport Association*” - Dangerous Goods Regulations – 55th Edition – 2014
- IMO – “*Internacional Maritime Organization*”. International Maritime Dangerous Goods Code (IMDG CODE) – 2012 Edition
- ICAO – “*International Civil Aviation Organization*” – Doc 9284-NA/905
- Ficha de Informações de Segurança de Produtos Químicos - FISPQ (Safety Data Sheet for Chemical Products) – NBR 14725 – of August 2012 – Associação Brasileira de Normas Técnicas
- ADR- “*Accord européen relatif au transport international des marchandises Dangereuses par Route*” – 2013 Edition

**This SDS is applicable only to the products identified herein and only when used properly**



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## 16- OTHER INFORMATION

- 16.1** Information contained in this SDS are based on the present state of our knowledge and experience and are intended to describe our product with respect to possible safety demands. The information's are not be considered as a warranty of quality specification. Eventual risks could occur by using the product for any application for which it has not been designed.
- 16.2** The user of the product must decide what measures are necessary to safety use of the product, either alone or combinations with other products and determine its environmental regulatory compliance obligations under any applicable Federal, State or Local laws and regulations.
- 16.3** The user is responsible to pass to all the users and technicians the suitable safety data and warnings concerning the risks mentioned in all documentation about the use of the product.
- 16.4** The user is not exonerate to check if other obligations have to be implemented due to inner land regulations or regulations inside his company concerning detention and manipulation of the product for which he is solely responsible.
- 16.5** The conditions or methods of handling, storage or use and disposal of the product are beyond CBC's control and may be beyond CBC's knowledge.  
For these reasons, CBC does not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of in any way connected with the handling, storage, use or disposal of the product.
- 16.6** The Statements and recommendations contained in this SDS do not supersede local, state or federal lass or Regulations. Proper authorities should be consulted on laws and regulation in storage, handling or transportation and use of Powder Smokeless- Double Base in each specific community.

### 16.7 Abbreviations and Definitions

ACGIH	American Conference of Governmental Industrial Hygienists
CAS N°	Chemical Abstracts Service Numbers
EMS	Emergency Schedules
HMIS	Hazardous Material Information System
LC <sub>50</sub>	Lethal Concentration 50 percent kill
LD <sub>50</sub>	Lethal Dose 50 percent Kill
LEL	Lower Explosive Limit
MFAG	Medical First Aid Guide
NA	Not Applied
NE	Not Established.
ND or NS	Not Defined or Not Specified
NFPA	National Fire Protection Association



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**16.7 Abbreviations and Definitions (Cont.)**

OSHA	Occupational Safety Health Administration
PEL	Permissible Exposure Level
ppm	Parts per million
REACH	Registration, Evaluation, Authorization and Restriction of Chemical
STEL	Short Term Exposure Limit
TDM	Toxic Dose Level
TLV	Threshold Limit Value
TWA	Time Weighed Average
UEL	Upper Explosive Limit
UNO	United Nations

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