



Product name: **Primers, Cap Type**

SDS N.º: 006 - Rev. 07

Date : October 21<sup>st</sup>, 2015

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## **1 IDENTIFICATION**

### **1.1 Product Identification**

Product Name : Primers, Small Arms Ammunition

Proper Shipping Name : Primers, Cap Type

**1.2- Product Use** : Primers, Large Rifles N° 9 ½, 9 ½ M (Magnum Rifle), N° 2 ½  
Primers, Small Rifles N° 5 ½, 7 ½  
Primers, Large Pistol and Revolvers N° 2 ½,  
Primers, Small Pistol and Revolvers N° 1 ½, 5 ½

### **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: Hazard Class: Explosive


Hazard category: Division 1.4


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<i>Appropriate elements of the labeling:</i>	
Pictograms	
Signal word	<b>WARNING</b>
Hazard statements	H204 - Fire or projection hazard
Precautionary statements	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P240 – Ground and bond container and receiving equipment P250 - Do not subject to grinding, mechanical shock and friction. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response precautionary statements	P370 + P380 - In case of fire: Evacuate area
Storage precautionary statements	P401 - Store in its original packaging.
Disposal precautionary statements	P501 - Disposal of primers in a container, containing water, preferably with detergent, which works as wetting agent.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Component of the primer cap boxer type	Chemical Component	CAS N° EC N°	MAX % IN CARTRIDGE						
			1 ½	1 ½ MIL	1 ½ P15	2 ½	5 ½	7 ½	9 ½
CAP	Copper (as brass)	7440-50-8 231-159-6	44.16	45.52	50.27	46.58	45.54	45.82	48.21
	Zinc (as brass)	7440-66-6 231-175-3	18.93	19.51	21.55	19.96	19.52	19.64	20.66
ANVIL	Copper (as brass)	7440-50-8 231-159-6	14.72	15.17	12.23	12.40	15.17	14.62	13.13
	Zinc (as brass)	7440-66-6 231-175-3	6.31	6.50	5.24	5.32	6.52	6.27	5.63


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Component of the primer cap boxer type	Chemical Component	CAS N° EC N°	MAX % IN CARTRIDGE						
			1 ½	1 ½ MIL	1 ½ P15	2 ½	5 ½	7 ½	9 ½
<b>PRIMING COMPOSITION (INSIDE THE CAP)</b>	Lead Styphnate	239-290-0 15245-44-0	4.80	0.36	0.34	0.49	0.36	0.38	0.58
	Tetracene	NAD 109-27-3	0.25	0.52	0.21	0.31	0.52	0.53	0.48
	Barium Nitrate	233-020-5 10022-31-8	7.57	4.81	6.29	9.21	4.81	4.95	4.48
	Aluminium - powder	231-072-3 7429-90-5	----	0.91	----	----	0.91	0.94	0.85
	Antimony Sulfide	215-713-4 1345-04-6	----	1.56	----	----	1.56	1.60	1.45
	Gum Arabic	232-519-5 9000-01-5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

NAD - Not Available Data

## 4 FIRST-AID MEASURES

**4.1 Inhalation:** Remove patient to fresh air. If the patient has stopped breathing, give artificial respiration. If symptoms of chronic effects are noticed, Contact a doctor.

**4.2 Ingestion:** Call a physician.

**4.3 Eyes:** Remove patient to fresh air. If eye irritation, contact a physician.

**4.4 Skin:** Wash hands with soap and water before eating or smoking.

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

#### 4.5.1 Exposure and Effects - Inhalation

**4.5.1.1- Acute:** Inhalation of dust or fumes of ignited primers may produce mild throat and eye irritation.

**4.5.1.2- Chronic:** None reported.

**4.5.1.3- First aid:** Remove person to fresh air. If overexposure occurred, contact a physician.

#### 4.5.2- Exposure and Effects - Ingestion

**4.5.2.1- Acute:** Not defined.

**4.5.2.2- Chronic:** Not defined.



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**4.5.2.3- First Aid:** Not defined.

**4.5.3- Exposure and Effects - Eyes**

**4.5.3.1- Acute:** Contact with large volume of fumes or if oversposure occurred, may cause minor eyes irritation.

**4.5.3.2- Chronic:** None reported.

**4.5.3.3-First Aid:** Remove person to fresh air and wash with water. If an irritation develops contact a physician.

**4.5.4- Exposure and Effects - Skin**

**4.5.4.1- Acute:** Contact of skin with cartridge presents no health hazard.

**4.5.4.2- Chronic:** Contact of skin with cartridge presents no health hazard.

**4.5.4.3- First Aid:** Wash hands with soap and water before eating or smoking.

**4.6 Notes to physician:**

Avoid contact with the product while helping the victim. Keep victim warm and at rest. Do not offer anything by mouth to an unconscious person.

**4.7 Exposure and Effects – Carcinogenicity**

Not Classificable as a human carcinogen. Agents, which cause concern that, could be carcinogenic for human but which cannot assessed conclusively because of lack of data.

**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**

Prolonged and repeated overexposure to lead dust or fumes (of fired primer mixture) may aggravate anemia and developmental toxicity to the fetus.

## **5 FIRE-FIGHTING MEASURES**

**5.1 Unusual Fire and explosion data**

When primers in their original factory package (primers not in intimate contact) are subjected to fire, they usually explode a box a time or the primers explode sequentially (the



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primers popping). There are no records which indicate that a explosion is to be expected under these conditions.

When primers have been removed from their original factory package and are in intimate contact with each other, it is known definitely that mass explosion occur in cases of fire.

If heated to 185°C (365°F), primers may ignite, independent of air.

Ignited primers can produce small metallic fragments which may cause eye injury or superficial skin wounds if unprotected by standard fire fighter turnout gear.

### **5.2 Extinguishing Media**

Flood with water to fight fire and to cool the primers packing's.

### **5.3 Firefighting Procedures**

In case of fire, flood area with water and cool the primers not reached by the fire. Use normal firefighting equipment. Wear full firefighting protective gear including approved face shield to protect from fragments.

## **6 ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions**

Prohibit smoking on the premises.

Evacuate all person from the area for 100m (334mm feet) 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 primers 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.



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## **7 HANDLING AND STORAGE**

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

- Avoid striking or shock in handling, storage or use.
- Avoid heating by fire, static electricity, sparks, hot tobacco ashes, or other unspecified abuses.
- Avoid handling, storage or use primers in bulk. Having contact one with another, one primer exploding can, and usually will, cause a violent simultaneous explosion of all primers so situated. In other words, one primer exploding for any reason under these conditions will normally cause all of the primers to explode in one violent blast.
- Avoid to expose to water, or any organic solvent, such as paint thinner, gasoline, kerosene, oil, grease, etc. The primers may deteriorate, resulting in misfires or poor ignition.
- Avoid buildup of static electricity. Precautions shall be taken on the person when handling primers or conducting handloading procedures. Loading cartridges equipment shall be electrically grounded.
- For loading or reloading cartridges, is not recommended the use of primer feeds, unless adequate protection from the hazard of explosion is provided. The placing of primers in tubes or columns or using other bulk systems in which the explosion of any primer may cause the explosion of all primers, is a potentially hazardous condition. It is the responsibility of the manufacturers of primer handling systems to provide safety and protective features for their equipment.
- It is recommended that primers be handled individually unless adequate safeguards are used.
- All loading or reloading cartridges equipment and adjacent areas must be kept scrupulously clean and free of primer dust and powder accumulations. Work areas and loading equipment must be cleaned by wiping with a damp cloth or sponge which should be thoroughly rinsed after each use.
- Fired primers, primer cups, anvils or other bits of hard, abrasive materials are a hazard during loading or reloading operations as contact with them may cause primers to fire.
- Accidentally spilled primers shall be picked up immediately as they may explode when stepped upon.
- An absolute minimum of primers shall be maintained at the loading operation. Only one packing tray at time shall be removed from the primer storage.
- When a priming operation is completed, any remaining primers shall be returned to the package in which they were originally contained.
- Never have an open flame, source of sparks, or hot particles in the vicinity of primers.
- Avoid disassembly primers.



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### 7.2 Hygiene measures:

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

### 7.3 Storage:

- Store primers only in their original factory packages. Do not transfer the primers from the original factory packages into one is not approved. The use of glass bottles , fruit jars, plastic or metal containers, or other bulk containers for primer storage is extremely hazardous and usually cause mass explosion (violent simultaneous explosion).
- Store in a dry, cool area. Do not crush or drop packages. Do not store primers where they will be exposed to the direct rays of the sun:
- The storage area must be free from any sources of excessive heat and isolated from open flames, furnaces, water heaters, etc.
- Do not store in the same area of solvents, flammable gases or highly combustible materials.
- Do not smoke in areas where primers are stored. Place appropriate “NO SMOKING” signs in there areas.
- If the temperature exceeds 38°C for 24 (twenty four) hours the magazine should be cooled by wetting the exterior of the building with water.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Component of the cartridge	Chemical Component	ACGIH TLV/ TWA mg/m <sup>3</sup>
CAP	Copper (as brass)	0.2 (a) 1.0 (b)
	Zinc (as brass)	NE


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Component of the cartridge	Chemical Component	ACGIH TLV/ TWA mg/m <sup>3</sup>
ANVIL	Copper (as brass)	0.2 (a) 1.0 (b)
	Zinc (as brass)	NE
PRIMING COMPOSITION (INSIDE THE CAP)	Lead Styphnate	0.05
	Tetracene	NE
	Barium Nitrate	0.5
PRIMING COMPOSITION (INSIDE THE CAP)	Aluminium - powder	5
	Antimony Sulfide	0.5
	Gum Arabic	NE

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

### 8.2.Engineering Controls

Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation. Use hearing protection. Machine guards are strongly recommended for loading cartridges operations.

### 8.3.Personal protective equipment

#### 8.3.1. Eyes / Face Protection:

Recommendable approved protective glasses, when performing any and all cartridges loading operations.

#### 8.3.2. Skin and body Protection:

Not normally required.

#### 8.3.3. Respiratory Protection:

Not generally required.





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## **9- PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: Externally, small cylinder of copper alloy
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	: 185°C (365°F) - (primer formulation)
Decomposition temperature	: 195°C (383°F)
Viscosity	: Not Applicable

## **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**

If is struck or is exposed to excess heat the primer ignite. May explode if heated above 185°C (365°F).

### **10.4 Conditions to avoid**

Listed previously.


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### 10.5 Incompatible materials

Paint thinner, gasoline, kerosene, oil, grease, water, Materials acids, alkalis, ammonia and other corrosive materials.

### 10.6 Hazardous decomposition products

When primer is ignited oxides of aluminium, nitrogen carbon, barium and lead are produced.

## 11- TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

POTENTIAL EXPOSURE ROUTES: The physical nature of this product makes absorption from any route unlikely. A small amount of inhalable particles may be created when cartridge is fired.

#### 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	> 5 g/kg (rat)
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	No Data

#### 11.1.2 Skin Corrosion/irritation

Contact of skin with primers presents no health hazard.

#### 11.1.3 Serious eye damage/eye irritation

Contact with large volume of fumes may cause minor eyes irritation.

#### 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.



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### **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, 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:**

Not biodegradable.



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#### **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**

If container should rupture, spilled primers should be picked up immediately and carefully. Avoid striking or shock the primers. Place all spilled primers from broken shipping boxes in a container of water to which detergent has been added as a wetting agent.

#### **13.2 Packing:**

After primers has been destroyed by proper incineration, the remaining scrap should be disposed off in accordance with local, state and federal codes which govern disposal.

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

The only proper disposal method for scrap, is to incinerate in small amounts in a burner specifically designed for destroying the primers.

### **14- TRANSPORT INFORMATION**

#### **14.1 IATA – VIA AIR**

Proper Shipping Name	:	Primers, Cap Type
UN N°	:	0378
Class	:	1.4B
Subsidiary Risk	:	-
Hazard Label	:	Explosive 1.4B
Packing Group	:	II
Passenger Aircraft	:	Forbidden
Cargo Aircraft	:	Pkg Instr. -133
		Max Net Qty/Pkge - 75Kg



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#### **14.2 IMDG – VIA SEA**

Proper Shipping Name : Primers, Cap Type  
UN N° : 0044  
Class : 1.4S  
Subsidiary Risk : -  
Hazard Label : Explosive 1.4S  
Packing Group : II  
Packing Instructions : P133  
EmS N° : F-B, S-X  
MFAG Table N° : See IMDG Code - Supplement  
Stowage Segregation : Category 05

#### **14.3 VIA LAND**

Proper Shipping Name : Primers, Cap Type  
UN N° : 0044  
Class : 1.4S  
Subsidiary Risk : -  
Hazard Label : Explosive 1.4S  
Packing Group : II  
Packing Instructions : P133

#### **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, Authorization 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 informations 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.



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### 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
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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