

PRODUCT AND PROCESS ENGINEERING

MATERIAL SAFETY DATA SHEET MATERIAL: Centerfire/ Rimfire Unprimed Cartridge Cases	MSDS N°: 019	Rev. 00
	Date : August 12, 2005	
	Supersedes:	Page 1 of 7 Pages
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1- PRODUCT AND COMPANY IDENTIFICATION

Product Name : Centerfire/ Rimfire Unprimed Cartridge Cases
Synonims : Unprimed Centerfire Shellcase,
Unprimed Rimfire Shellcase,
Unprimed Components for Small Arms Cartridges
Proper Shipping Name : See Item 13 – Shipping Data
Chemical Family : Cooper / Zinc Alloys
Formula : Not Applicable
Trade Name : Not Applicable
Product Use : In Small Arms Cartridges
Company Address : Companhia Brasileira de Cartuchos
Product Engineering
Av. Humberto de Campos, 3220
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2- CHEMICAL COMPONENTS

COMPONENTS	CAS	% BY WEIGHT	TLV/TWA
Copper	7440 – 50 - 8	68,5 – 71,5	0,2 mg/m ³ as copper fumes 1 mg/m ³ as copper dust
Zinc	7440 - 66 - 6	Remainder	None established

3- PHYSICAL AND CHEMICAL DATA

PROPERTY	VALUE
Physical State, Appearance Color	Solid, Cylindrical Red/Gold metallic (non-plated) Silver colored (nickel or tin plated)
Odor	None
Molecular weight	Not Applicable
Auto ignition temperature	Not Applicable
Freezing point / Melting point	Not Applicable
Boiling point	Not Applicable
Flash point	Not Applicable
pH	Not Applicable
Vapor density (air = 1)	Not Applicable
Vapor pressure (mm Hg at 25°C (77° F))	Not Applicable
Specific gravity (water = 1 at 20° C / 68°F – g/cc)	
Buth density (g/cc)	
Solubility in water – 20°C (68° F)	Not Applicable
Hygroscopicity	Not Applicable
Viscosity (cps)	Not Applicable
Decomposition temperature	Not Applicable
Evaporation rate	Not Applicable
Volatiles, percent by volume	Not Applicable
Explosive	No
Detonation temperature	Not Applicable
Detonation velocity	Not Applicable
Upper Explosive Limit	Not Applicable
Lower Explosive Limit	Not Applicable
Combustible	No
Flammable	No
Pyrophoric	No
Burning rate of material	Not Applicable
Flamability classification (29 CFR 1910 – 1200)	Not Applicable

4- HAZARDOUS IDENTIFICATION

4.1- Health Effects

The Centerfire / Rimfire Unprimed cartridge cases are manufactured with copper / zinc alloys. Therefore under normal handling of the cartridge cases, no exposure to any harmful materials will occur.

4.2- Physical and Chemical Hazards Fire Fighting and Explosions Hazards

None know.

5- HEALTH HAZARD DATA

When ammunition containing cartridge cases is fired, a small amount of fumes and/or of particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain trace amounts of copper/ zinc alloy.

5.1- Eyes

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

5.2- Skin

Wash with large quantity of soap and water.

5.3- 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.

5.4- Ingestion

Call a physician. Never induce vomiting in unconscious person.

6- FIRE FIGHTING MEASURES

6.1- Unusual Fire and Explosion Hazards

None know.

6.2- Extinguishing Media

Choose extinguishing media for surrounding materials.

6.3- Special Firefighting Procedures

In case a fire, use normal fire fighting equipment.

7- SPILLS, LEAKS, HANDLING AND WASTE DISPOSAL

A spill of centerfire / rimfire unprimed cartridge cases will normally not require emergency response teams capabilities. If, however, a large spill occurs call for technical assistance in each specific community.

8- HANDLING AND STORAGE

8.1- Handling

No special requirements.

8.2- Storage

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

8.3- Protective Equipment

When ammunitions containing cartridge cases are fired:

- Ventilation : Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation
- Eye/Face protection : Use safety glasses
- Skin protection : Not normally needed
- Respirators : Appropriate respiratory protection is required when exposed to airborne dust, fumes, smoke, etc.
- Ears protection : Appropriate hearing protection is required
- General Hygiene : Do not smoke, drink or eat while loading unprimed centerfire/ rimfire cartridge cases. Wash hands thoroughly after the loading.

9- REACTIVITY AND POLYMERIZATION

9.1- Stability

Stable under normal temperatures and pressure

9.2- Materials to avoid

See item 8.2.

9.3- Hazardous decomposition products

Copper fume, zinc oxide fume

9.4- Polymerization

Not occurs.

10- TOXICOLOGICAL INFORMATIONS**10.1- Potencial exposure**

When ammunition is fired inhalable particles may be created by projectiles

10.2- Animal toxicity data

Not applicable

10.3- Subchronic Chronic Toxicity

None know or reported

10.4- Mutagenicity

None know or reported.

10.5- Reproductive, Teratogenicity or Development effects

None know or reported

10.6- Neurological effects

None know or reported

10.7- Carcinogenicity

None know or reported to be carcinogenic

10.8- Interactions with other chemicals which increase toxicity

None know or reported

11- ECOLOGICAL INFORMATIONS**11.1- Ecotoxicity**

No data is available. For the individual constituents are as follows:

Copper: The copper toxicity to aquatic organisms varies not only with the species, but also with characteristics chemical and physical of the water.

Zinc: Concentrations of zinc between 0,13mg/l up to 4 mg/l have been reported as lethal, to fishes in accordance with the characteristics chemical and physical of the water (hard or soft water, temperature, time of exposure).

11.2- Mobility

No data available.

11.3- Persistence / Degradability

No biodegradable

11.4- Bioaccumulation

No data

12- DISPOSAL CONSIDERATIONS

Care must be taken to prevent environmental contamination from use of the 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- SHIPPING DATA

IATA – DGR – Via Air, IMDG – CODE – Via – Sea , U. S. DOT – Via Land:

- Proper Shipping Name : Not Regulated
Not Classified by UN as Dangerous for Transport
- UN N° : Not Applicable
- Packing Group : Not Applicable
- Hazardous Label : Not Applicable
- Reportable Quantity : Not Regulated
- Special Comments : None

14- NOTES

14.1- The information in this MSDS should be provided to all who will use, handle, store, transport or otherwise be exposed to this material. The information were been prepared for the guidance of Plant Engineering Operations and Management and for persons working with or handling this material.

14.2- CBC has compiled the informations and recommendations contained in this MSDS from sources believed to be reliable. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of the material must decide what measures are necessary to safety use of this material, either alone or in combination with other products and determine its environmental regulatory compliance obligations under any applicable Federal, State or Local laws and regulations.

- 14.3-** The conditions or methods of handling, storage or use and disposal of the material are beyond CBC's knowledge. For these reasons, CBC does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in way connected with the handling, storage, use or disposal of the product.
- 14.4-** The statements and recommendations contained in this MSDS do not supersede Federal, State or Local Laws or Regulations . Proper authorities should be consulted on laws and regulations in storage, handling or transportation and use of the material in each specific community.

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