

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product : **CENTERFIRE LOADED ROUND FOR SMALL CALIBER
(Brass case)**

2. HAZARDOUS COMPONENT INFORMATION

Centerfire ammunition for small caliber automatic weapons is made of the following 4 (four) components. The hazardous chemicals contained in each are listed. The percent by weight of the hazardous ingredients in the a/m ammo are listed in the table below:

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|---------------|--|
| 1. Bullet | Lead, Copper, Zinc, Steel, Antimony |
| 2. Brass case | Copper, Zinc |
| 3. Propellant | Nitrocellulose, Nitroglycerin, Diphenylamine, Graphite |
| 4. Primer | Copper, Zinc, Tetrazene, Antimony, Barium, Lead
Trinitroresorcinate |

Hazardous Ingredients	Procent by Weight
Copper	48 %
Zinc	18 %
Lead	17 %
Antimony	< 0.1 – 2 %
Barium	< 0.5 %
Nitroglycerin	< 1 %
Diphenylamine	0.2 %
Graphite	< 1 %
Lead trinitroresorcinate	< 0.5 %
Nitrocellulose	10 %
Tetrazene	< 0.1 %

3. HAZARD IDENTIFICATION

Emergency overview: Accidental fire may cause low-energy fragments to be emitted thus causing potential eye injury.

Potential Human Health Effects:

Skin Contact individuals	May cause allergic reaction (sensitization) in susceptible individuals
Eye contact	Dust and fumes can irritate the eyes causing redness and discharge
Inhalation	Inhalation of dust or fumes may cause irritation to nose , throat, upper respiratory tract and lungs. Irritation may lead to bronchitis, headache, lowering of blood pressure and weakness.
Ingestion / Absorption	Ingestion may cause severe headache , nausea, vomiting, abdominal pain, fatigue, diarrhea, trembling, ringing in ear and salivation.

Carcinogenicity Information:

This product is not classified as carcinogen. Lead is classified as carcinogen.

4. FIRST AID MEASURES

Skin Contact:	Wash affected area thoroughly with soap and water. Remove contaminated clothing. Wash clothing thoroughly prior to reuse. Discard any contaminated leather items (i.e. shoes, etc.)
Eye contact:	If wearing contacts, immediately remove contact lenses. Hold eyelids apart and flush eyes thoroughly with water for at least 15 minutes. Obtain medical attention immediately.
Inhalation:	Immediately remove to fresh air. Administer artificial respiration, if necessary. If breathing is difficult, administer oxygen. Obtain medical attention immediately.
Ingestion / Absorption	If conscious, drink large amounts of water. Induce vomiting. Immediately contact a physician. Never induce vomiting or give anything by mouth to an unconscious person.

5. FIRE HAZARDS

Flammable Properties: May ignite if heated at 250 °F (120 °C), Will ignite when exposed to flame and high temperatures. Be cautious of low-energy fragments.

Extinguishing Media: Flood fire with water to fight fire and cool shells. If no water is available, use carbon dioxide, dry chemical or earth.

Fire-Fighting Instructions: Evacuate area immediately. Deluge area with water. Wear full fighting protective gear including face shield or SCBA to protect from fragments.

6. ACCIDENTAL RELEASE MEASURES

Safeguards: Remove from all sources of ignition.

Spill Cleanup: Use non-sparking equipment to clean up spill.

Accidental Release: See above.

7. HANDLING AND STORAGE

Personal Handling: Handle with care. Do not strike or crush the rounds.

Storage: Store in original containers in a cool, dry, well-ventilated area away from all sources of ignition. Do not subject to mechanical shock. Keep out of reach of children. This product **must not be stored** with acids, strong oxidizers or caustics.

8. PERSONAL PROTECTION / EXPOSURE CONTROLS

Engineering Controls: Local exhaust ventilation is recommended if significant dusting occurs. Otherwise, use general exhaust ventilation.

Personal Protective Equipment: Safety glasses recommended when handling or firing rounds.
Hearing protection recommended when firing rounds.
Use of an approved respirator is recommended when concentrations to fumes and / or dust exceed the admitted levels.

Exposure Guidelines: Keep product away from sources of accidental ignition.

Exposure Limits: Exposure limits listed with each hazardous chemical.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Form :	Solid	Vapor Density:	N/A
Color:	Variable	Evaporation Rate:	N/A
Odor:	None	Melting Point:	N/A
Boiling point:	N/A	Solubility in Water:	N/A
Specific gravity:	N/A	pH:	N/A

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal use conditions. Will not react with water.

Other hazards:

Incompatibility: Incompatible with acids, strong oxidizers and caustic.

Polymerization: Will not occur.

Conditions to avoid: Flames, sparks, percussion, shock, static, high temperatures (266 °F or 130 °C or above)

11. TOXICOLOGICAL INFORMATION

Oral LD 50: No available data
Dermal LD 50: No available data
Inhalation LC 50: No available data
Irritation: Not a skin or eye irritant

12. ECOLOGICAL INFORMATION

Aquatic toxicity: Lead (LC 50) to Bluegill : 2 – 5 mg/l
Barium to Stickleback: 400 mg/l

Environmental Impact: When used and disposed of properly, there is no environmental impact.

13. DISPOSAL CONSIDERATIONS

This product is considered a characteristic hazardous waste for disposal purposes only. Dispose of as required by local laws and regulations.

EPA Hazardous Waste Code : D008 (lead).

14. TRANSPORTATION INFORMATION

Shipping information:

Proper shipping name: Cartridges, Small Arms
Hazard class: 1.4 S
UN / NA No.: UN 0012
Shipping Label: "1.4S"

15. REGULATORY INFORMATIONS

None.

16. OTHER INFORMATION

Hazard classification:

Cronic Health:	Headache, nausea, weakness
Acute Health:	Anemia, embryotoxin
Fire hazard:	0 (per HMIS rating)
Pressure Hazard:	Sudden release of pressure
Reactivity Hazard:	1 (per HMIS rating)

NPCA – HMIS Ratings:

Health:	2
Flammability:	0
Reactivity:	1

References:

- International Standards Organization Safety Data Sheet Standard
- American National Standards Institute, Z 400.1-1993

17. LIST OF ACRONYMS

HMIS	Hazardous Materials Identification System
LC	Lethal Concentration
LD	Lethal Dose
SCBA	Self-contained Breathing Apparatus
UN / NA	United Nations / North American (Identification number)