Remington Arms *Material Safety Data Sheet*

This Material Safety Data Sheet has been prepared in compliance with Federal OSHA Hazard Communication Standard 29 CFR 1910.1200, ANSI Z400.1-1993 and the ISO Safety Data Sheet Standard. This product may be considered to be a hazardous chemical under 29 CFR 1910.1200. This information is required to be disclosed for safety in the workplace. ***This MSDS is applicable only to the product identified herein and only when used properly.***

NOTE: Refer to Section XVII for *List of Acronyms.*

I. PRODUCT IDENTIFICATION

Product: **CENTERFIRE/RIMFIRE AMMUNITION (PROOF)**

HMIS Rating
Health: 2
Flammability: 0
Reactivity: 1

IN EVENT OF EMERGENCY
(Spill, Leak, Fire, Exposure, Accident)
CALL CHEMTREC DAY OR NIGHT
(800) 424-9300
In Arlington, VA 741-5000
Outside Continental U.S.A. (703) 741-5000

II. HAZARDOUS COMPONENT INFORMATION

Centerfire/Rimfire Proof Ammunition is comprised of the following four (4) components. The hazardous chemicals contained in each are listed. The percent by weight of the hazardous ingredients in Centerfire/Rimfire Ammunition are listed in the table below.

1. **Projectile** .....Lead, Copper, Zinc, Antimony, Arsenic
2. **Brass Shellcase** .....Copper, Zinc, Nickel
3. **Propellant** .....Nitrocellulose, Nitroglycerin, Dibutyl Phthalate, Diphenylamine, Dinitrotoluene, Graphite
4. **Primer** .....Copper, Zinc, Lead Styphnate, Antimony, Barium, Tetrazene

Hazardous Ingredients	Percent by Weight	CAS Number	Exposure Limits (PEL)
Copper	16-58%	7440-50-8	None established
Zinc	6-35%	7440-66-6	TWA (fume) 0.1 mg/m³ TWA (dust, mist) 1.0 mg/m³
Lead	14-75%	7439-92-1	TWA 0.05 mg/m³
Antimony	0-2%	7440-36-0	TWA 0.5 mg/m³
Arsenic	0-0.5%	7440-38-2	TWA 0.5 mg/m³
Barium	Less than 0.5%	7440-39-3	TWA 0.5 mg/m³
Nitroglycerin	0-18%	55-63-0	TWA CL 0.2 ppm (skin) STEL 0.1 mg/m³ (skin)
Dibutyl Phthalate	0-2.3%	84-74-2	TWA 5 mg/m³
Diphenylamine	0-2.3%	122-39-4	TWA 10 mg/m³
Nickel	Less than 1%	7440-02-0	TWA Soluble Compounds:

			0.1 mg/m³ TWA Insoluble Compounds 1.0 mg/m³
Graphite	Less than 1%	7440-44-0	(Natural) TWA 2.5 mg/m³ (Synthetic) Respirable Fraction: 5 mg/m³
Lead Styphnate Lead Trinitroresorcinate	Less than 0.5%	63918-97-8	None established
Nitrocellulose Cellulose Tetranitrate	Less than 1%	9004-70-0	None established
Tetrazene	Less than 0.1%	109-27-3	None established
2,4-Dinitrotoluene	0-5.4%	121-14-2	TWA 1.5 mg/m³

III. HAZARDS IDENTIFICATION

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

Potential Human Health Effects:

Skin Contact: 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 a carcinogen by IARC, OSHA, NTP or EPA. Lead and Arsenic are classified a carcinogen by IARC.

IV. 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 or Poison Control Center. ***Never*** induce vomiting or give anything by mouth to an unconscious person.

V. FIRE HAZARDS

Flammable Properties: May ignite if heated to 250°F. 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 fire-fighting protective gear including face shield or SCBA to protect from fragments.

VI. ACCIDENTAL RELEASE MEASURES

Safeguards: Remove from all sources of ignition.

Spill Cleanup: Use non-sparking equipment to clean up spill. If disposal is necessary, refer to *XIII. DISPOSAL CONSIDERATIONS* .

Accidental Release: See above.

VII. HANDLING AND STORAGE

Personnel 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.

VIII. 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 a NIOSH/MSHA-approved respirator is recommended when concentrations to fumes and/or dust exceed the PEL or TLV.

Exposure Guidelines:

- Keep product away from sources of accidental ignition.

Exposure Limits:

- Exposure limits listed with each hazardous chemical.

IX. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

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

X. STABILITY AND REACTIVITY

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

Other Hazards:
Incompatibility: Incompatible with acids, strong oxidizers and caustics.
Polymerization: Will not occur.

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

XI. 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.

XII. ECOLOGICAL INFORMATION

Aquatic Toxicity:
Lead (LC 50) to Bluegill: 2-5 mg/l
Barium to Stickleback: 400 mg/l
Barium Nitrate to Stickleback: 760 mg/l

Environmental Impact:

When used and disposed of properly, there is no known environmental impact.

XIII. DISPOSAL CONSIDERATIONS

This product is considered a characteristic hazardous waste per 40 CFR 261.24 ***for disposal purposes only***. Dispose of as required by local, state and federal laws and regulations.

EPA Hazardous Waste Code: D008 (lead)

XIV. TRANSPORTATION INFORMATION

SHIPPING INFORMATION
Proper Shipping Name: Cartridges, Small Arms
Hazard Class: ORM-D
UN/NA No: N/A
Packing Group: N/A
Shipping Label: None required.
Special Information: May be reclassified internationally as:
Hazard Class: 1.4S
UN/NA No.: UN0012
Packing Group: II
Shipping Label: 1.4S label (or marked 1.4S)

XV. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Status: Included on list.

This product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

XVI. OTHER INFORMATION

NFPA Rating: Not established.

HAZARD CLASSIFICATION

Chronic 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:

Code of Federal Regulations, Monthly Summary, CFR 1910.1200(g) and Appendix E (B.), Regulations Management Corporation, Bloomington, Indiana, July 1, 1994.
Hazardous Chemical Desk Reference: Third Edition, Richard J. Lewis, Sr., Van Nostrand Reinhold, Copyright 1993.
American National Standards Institute, Z400.1-1993
International Standards Organization Safety Data Sheet Standard.

XVII. LIST OF ACRONYMS

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA WEEL	American Industrial Hygiene Association-Workplace Environmental Exposure Level
ANSI	American National Standard Institute
BEI	Biological Exposure Indexes
CAS	Chemical Abstract Service
CFR	Code of Federal Regulations
CL	Ceiling Limits (not to be exceeded)
DSL	Domestic Substances List
EPA	Environmental Protection Agency
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ISO	International Standards Organization
LC	Lethal Concentration
LD	Lethal Dose
MITI	Ministry of International Trade and Industry (Japan)
MSHA	Mine Safety and Health Appliance
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTA	National Transportation Agency (Canada)

NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
ORM	Other Regulated Materials
PEL	Permissible Exposure Limit (OSHA)
SCBA	Self-contained Breathing Apparatus
STEL	Short-Term Exposure Limit
TLV	Threshold Limit Values (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN/NA	United Nations/North American (Identification number)
SARA	Superfund Amendments and Reauthorization Act
RCRA	Resource Conservation and Recovery Act

For additional information, please contact:
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Madison, NC 27025-0700
(800) 243-9700

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